

## STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING



FORM 3

AMENDED REPORT (highlight changes)

	A	PPLICAT	ION FOR	PERMIT TO	DRILL		5. MINERA Fee	L LEASE NO:	6. SURFACE: Fee
1A. TYPE OF WO	ORK: DF	RILL 🔽 F	REENTER [	DEEPEN			7. IF∕INDIA N/A	N, ALLOTTEE OR	TRIBE NAME:
B. TYPE OF WE	IL: OIL	GAS 🗹	OTHER	SING	SLE ZONE 🚺 MULTIPLE :	ZONE 🎵	8. UNIT or	CA AGREEMENT N	IAME:
2. NAME OF OPE	RATOR:		<del></del>			/		AME and NUMBER	
XTO Energ		•					COP	16-8-7-21	
3. ADDRESS OF					PHONE NUMBER:	/	10. FIELD	AND POOL, OR WI	LDCAT:
2700 Farm	ingtǫn Ave.∣	B <sub>cıty</sub> Farmir	igton <sub>ST.</sub>	ATE NM ZIP 874	101 (505) 324-1¢	<b>9</b> 0	Ferror	Sandstone	
4. LOCATION OF	WELL (KOOTAGE	S)	49208	DY (	30 1150011		11. QTR/Q MERIDI	TR, SECTION, TOV	MNSHIP, RANGE,
AT SURFACE:	905' FNL x	1942' FWL	7'090		7.430947		NENW	-u. 7 160	8 8 <b>7</b> E S
	PRODUCING ZON		43664	.149	39.450949		INCIAAA	7 100	) #E 3
14. DISTANCE IN	MILES AND DIREC	CTION FROM NEAR	EST TOWN OR P	OST OFFICE:			12. COUNT	Y:	13. STATE:
Approxim	nately 14 mil	es Northwes	t of Hunting	gton, Ut			Emen	,	UTAH
		ERTY OR LEASE LI		_	FACRES IN LEASE:	17. N	UMBER OF A	CRES ASSIGNED	TO THIS WELL:
1942				14	6707				
	ONEADEOCIACII	(DRILLING, COMPL	- C	19. PROPOSED			OV 17 DE 000		
	R) ON THIS LEASE		ENED, OR	19. PROPOSED		1 .	OND DESCR		
7500'					/ 7,2		TB-0001		
21. ELEVATIONS	S (SHOW WHETHE	R DF, RT, GR, ETC.	),	1 .	TE DATE WORK WILL START:	23. E	STIMATED D	URATION:	
9493' Ground Elevation 8/25/2007						2	weeks		
24.			PROPO	SED CASING A	ND CEMENTING PROGR	AM			
SIZE OF HOLE	CASING SIZE, C	GRADE, AND WEIG	HT PER FOOT	SET NIG DEPTH	CEMENT TYP	E, QUANTITY	YIELD, AND	SLURRY WEIGHT	
14.75"	11.75"	J-55	47#	600	Type V	+/- 3	323 sx	1.61 ft3/sx	14.2 ppg
8.75"	5.5"	J-55	15.5#	7,290	CBM light wt - lead	+/-	55 sx	4.15 ft3/sx	10.5 ppg
					CBM light wt - tail	+/-	97 sx	1.81 ft3/sx	13.5 ppg
				/	,				
	,								
		- 1.0 1 1.1 1 1 1 1	/_						
			_/						
25.				ATTA	CHMENTS				
VERIFY THE FO	LLOWING ARE ATT	ACHED IN ACCOR	DANCE WITH THE	UTAH OIL AND GAS O	ONSERVATION GENERAL ROLES:				<u> </u>
WELL PL	.AT OR MAP PREPA	ARED BY LICENSEI	SURVEYOR OR	ENGINEER	COMPLETE DRILLING	иа к			
		WATER RIGHTS A			FORM 5, IF OPERATOR		OR COMPAN	Y OTHER THAN T	HE LEASE OWNER
NAME (PLEASE	PRINT) Kyla V	aughan	1)	· · · · · · · · · · · · · · · · · · ·	TITLE Regulatory	/ Compli	ance Te	ch	
SIGNATURE	Kyli	Vay	draw		DATE 6/1/2007				
(This space for Sta	ite use onto	(	)	and a second of the second			/		
			-				`	V	
	/ 11:	3-015-3	Malla						
API NUMBER AS	SIGNED:	7017	1110		APPROVAL:				
								DEG	-

(11/2001)

(See instructions on Reverse Side)

RECEIVED

JUN 08 2007

#### Range 8 East Location: The well location was determined using a Trimble 5700 GPS survey grade unit. (S89'52'E - 5504.40') Basis of Bearing: The Basis of Bearing is GPS Measured. GLO Bearing: The Bearings indicated are per the recorded plat obtained from the U.S. Land Office. #16-8-7-21 ELEV. 9492.5 Basis of Elevation: Basis of Elevation of 9694.0' being at the Southeast Section corner of Section 36, Township 15 South, Range 7 East, $\mathcal{V}$ 1942.24 Salt Lake Base & Meridian, as shown on the Hiawatha Quadrangle 7.5 Minute Series Map. Description of Location: Proposed Drill Hole located in the NE/4 NW/4 of Section 7, T16S, R8E, S.L.B.&M., being 905.09' South and 1942.24' East from the Northwest Section Corner of Section 7, T16S, R8E, Salt Lake Base & Meridian. 5280.00") Surveyor's Certificate: $\mathcal{Q}$ I, Albert J. Spensko, a Registered Professional Land Surveyor, holding Certificate 146652 State of Utah, do hereby certify that the information on this drawing is a true and accurate survey based on data of record and was conducted under my Townshippersonal direction and supervision as shown hereon. TALON RESOURCES, INC. Phone (435)687-5310 Fax (435)687-5311 (N89'52'E - 5501.76') Legend **Drill Hole Location** Section 7, T16S, R8E, S.L.B.&M. NOTES: 1. UTM and Latitude / Longitude Coordinates are derived using a GPS Pathfinder and are shown in NAD 27 Datum. **Brass Cap (Found) Emery County, Utah** Drawn By: Brass Cap (Searched for, but not found) N. BUTKOVICH GRAPHIC SCALE Drawing No. **Rock Pile** AT / LONG A-139°27'03.279" N GLO ( IN FEET ) III°04'11.543" W **GPS Measured** 1 inch = 1000 ft.Shoot 1 of 4

615 North 400 East P.O. Box 1230 Huntington, Utah 84528

E-Mail taloneetv.net

COP 16-8-7-21

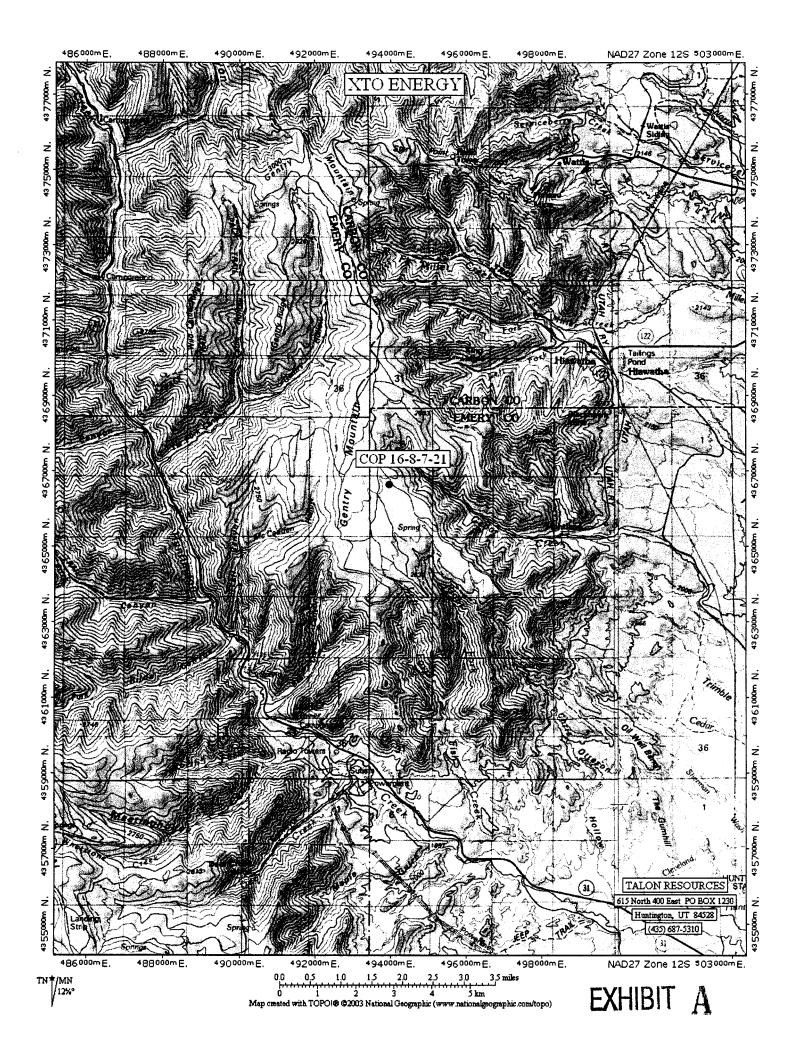
Checked By: L.W.J./A.J.S.

4/23/07

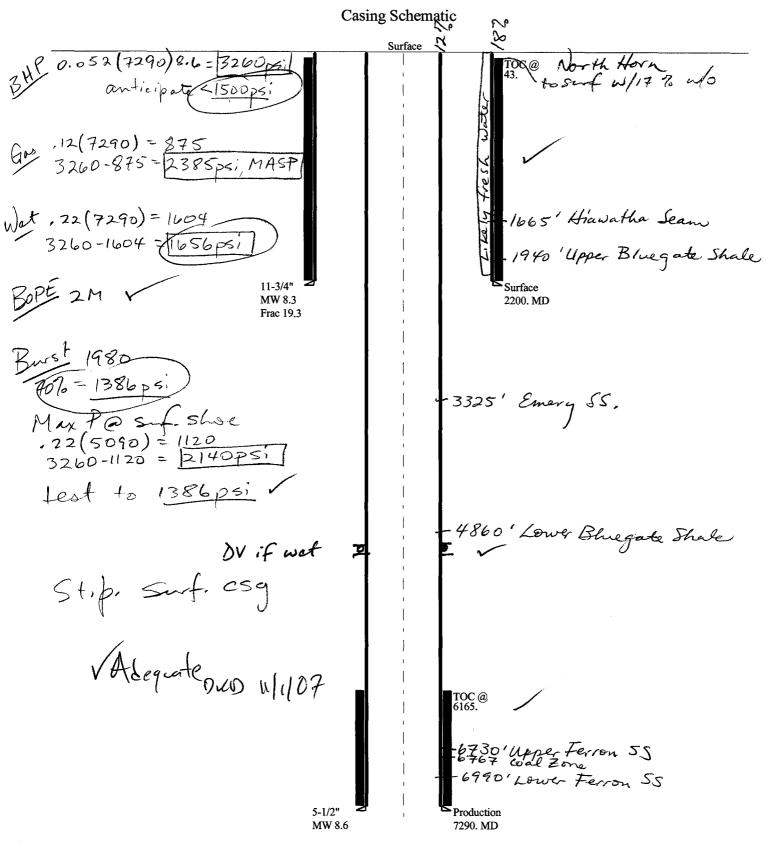
1" = 1000'

Job No.

2826



### 2007-09 XTO COP 16-8-7-21



Well name:

2007-09 XTO COP 16-8-7-21

Operator:

XTO Energy, Inc.

String type:

Surface

Project ID:

43-015-30716

Location:

**Emery County** 

Minimum design factors: **Environment:** 

1.125

Collapse Collapse: Design factor

Mud weight: Internal fluid density:

**Design parameters:** 

8.330 ppg 2.000 ppg

H2S considered? Surface temperature: No 65 °F

Bottom hole temperature: Temperature gradient:

96 °F 1.40 °F/100ft

Minimum section length:

150 ft

**Burst:** 

Design factor 1.00 Cement top:

Surface

**Burst** 

Max anticipated surface

pressure: Internal gradient: Calculated BHP

Annular backup:

1,936 psi 0.120 psi/ft 2,200 psi

8.33 ppg

**Tension:** 

8 Round STC: 1.80 (J) 1.80 (J) 8 Round LTC: 1.60 (J)

**Buttress:** Premium:

1.50 (J) Body yield: 1.50 (B)

Tension is based on air weight. Neutral point: 1,929 ft Non-directional string.

Re subsequent strings:

Next setting depth: Next mud weight: Next setting BHP:

7.290 ft 8.600 ppg 3,257 psi

Fracture mud wt: Fracture depth: Injection pressure: 19.250 ppg 2,200 ft 2,200 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	2200	11.75	42.00	H-40	ST&C	2200	2200	10.959	1474
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	723	1040	1.438	1936	1980	1.02	` <b>9</b> 2 ´	`307	3.32 J

Prepared

Helen Sadik-Macdonald

Div of Oil, Gas & Minerals by:

Phone: 801-538-5357 FAX: 801-359-3940

Date: October 31,2007 Salt Lake City, Utah

**ENGINEERING STIPULATIONS:** 

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:

2007-09 XTO COP 16-8-7-21

Operator:

XTO Energy, Inc.

String type:

**Production** 

Design is based on evacuated pipe.

Project ID:

43-015-30716

**Environment:** 

Location:

**Collapse** 

**Emery County** 

Minimum design factors:

Collapse:

Design factor

H2S considered? 1.125

Surface temperature:

No 65 °F

Bottom hole temperature: 167 °F Temperature gradient: 1.40 °F/100ft

Minimum section length:

368 ft

**Burst:** 

Design factor

1.00

Cement top:

6,165 ft

**Burst** 

Max anticipated surface

No backup mud specified.

pressure: Internal gradient:

Design parameters:

Mud weight:

1,653 psi

8.600 ppg

Calculated BHP

0.220 psi/ft 3,257 psi

**Tension:** 

8 Round STC:

1.80 (J) 8 Round LTC: 1.80 (J) **Buttress:** 1.60 (J)

Premium: Body yield: 1.50 (J) 1.50 (B)

Tension is based on air weight. Neutral point: 6,342 ft Non-directional string.

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	7290	5.5	15.50	J-55	ST&C	7290	7290	4.825	974.2
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	3257	4040	1.240	3257	"4810	1.48	`113´	` 202´	1.79 J

Prepared

Helen Sadik-Macdonald

by: Div of Oil, Gas & Minerals

Phone: 801-538-5357

FAX: 801-359-3940

Date: October 24,2007 Salt Lake City, Utah

**ENGINEERING STIPULATIONS:** 

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

#### STATE ACTIONS

## **Resource Development Coordinating Committee**

#### Public Lands Policy Coordination Office 5110 State Office Building

#### **SLC, UT 84114**

Phone No.	o. 537-9230
1. State Agency	2. Approximate date project will start:
Oil, Gas and Mining	
1594 West North Temple, Suite 1210	Upon Approval or June 28, 2007
Salt Lake City, UT 84114-5801	
3. Title of proposed action:	
Application for Permit to Drill	
4. Description of Project:	
XTO Energy proposes to drill the COP 16-8-	7-21 well (wildcat) on a Fee lease, Emery County,
	C for consideration of resource issues affecting state
	s the primary administrative agency in this action
and must issue approval before operations comm	
5. Location and detailed map of land affected (sit	e location map required, electronic GIS map
preferred)	•
(include UTM coordinates where possible) (indic	ate county)
905' FNL 1942' FWL, NI	E/4 NW/4,
Section 7, Township 16 South, Ra	nge 8 East, Emery County, Utah
6. Possible significant impacts likely to occur:	
Surface impacts include up to five acres of su	orface disturbance during the drilling and completion
phase (estimated for five weeks duration). If oil	and gas in commercial quantities is discovered, the
	nce of between one and two acres – not including
	or gas is discovered, the location will be completely
reclaimed.	- · ·
7. Identify local government affected	
a. Has the government been contacted? No.	
b. When?	
c. What was the response?	
d. If no response, how is the local government	t(s) likely to be impacted?
8. For acquisitions of land or interests in land by	DWR or State Parks please identify state
representative and state senator for the project a	rea. Name and phone number of state
representative, state senator near project site, if a	
a. Has the representative and senator been con	
9. Areawide clearinghouse(s) receiving state action	on: (to be sent out by agency in block 1)
Southeastern Utah Association of Gove	rnments
10. For further information, contact:	11. Signature and title of authorized officer

Diana Mason

Phone: (801) 538-5312 11. Signature and title of authorized officer K. Michael Hehertzer

Gil Hunt, Associate Director

June 14, 2007 Date:

Once Recorded Please Return To: Ryan M. O'Kelley 810 Houston Street Fort Worth, Texas 76102

#### MEMORANDUM OF SURFACE USE AND DAMAGE AGREEMENT

COP 16-8-17-22 and COP 16-8-7-21

#### KNOW ALL MEN BY THESE PRESENTS

That C.O.P. Coal Development Company., a Utah Corporation, whose address is 3212 South State Street, Salt Lake City, Utah, 84115-3825, ("Grantor") and XTO Energy Inc., a Delaware Corporation, whose address is 810 Houston Street, Fort Worth, TX 76012-6298 ("Grantee") have entered into a Surface Use and Damage Agreement dated effective as of the 25th day of July, 2007 ("Agreement").

The Agreement, which is unrecorded and may be found in the files of Grantor and Grantee, is adopted herein and made a part hereof by reference to the same full extent as if all its provisions were copied in full in this Memorandum.

Pursuant to the terms of the Agreement, Grantor grants to Grantee and all of its parent, subsidiary, or other affiliated companies, their agents, employees and others authorized by them a nonexclusive private right of way upon and across Grantor's property located in the SW/4 of Section 6, N/2 & SE/4 of Section 7, SW/4 of Section 8, and the NW/4 of Section 17, Township 16 South, Range 8 East, S.L.B.&M., Emery County, Utah., in the location as approximately shown on **Exhibit A**, attached hereto and made a part hereof, for roads, gathering system pipelines, transmission pipelines, power lines, appurtenances, valves, metering equipment, cathodic protection, wires, conduits, cables, and associated facilities, related to its Operations ("Property"), for the purpose of access to and from mineral leases and rights it owns and operates underlying and in the vicinity of the Property ("Leases"), maintenance and operation of the Leases, production from the Leases and other purposes related to conducting oil and gas operations related to the Leases.

This Memorandum shall be binding on and inure to the benefit of Grantor and Grantee, their respective heirs, administrators, successors and assigns.

The parties hereto have executed this Memorandum as of the dates of the respective acknowledgements.

**GRANTOR:** 

C.O.P. COAL DEVELOPMENT COMPANY

A Utah Corporation

J.O. Kingston,

President

**GRANTEE:** 

XTO ENERGY INC.,

A Delaware corporation

By: Clever S. Ran. Hans mad

Edwin S. Ryan, Jr.

Senior Vice President - Land

Administration

State of Utah	}			
County of Salt Lake	}			
I, the undersigned authority	y, a Notary Public	in and for said	County in said	d State, hereby
certify that J.O. Kingstor	ı, whose name a	s President of	C.O.P. Coal	Development
Company, is signed to	the foregoing M	emorandum of	Surface Use	And Damage
Agreement, and who is kr	nown to me, ackn	owledged befor	e me on this o	lay that, being
informed of the contents of	f the instrument, h	e, as authorized	agent and with	full authority,
executed the same voluntar	ily and as the act o	f said corporation	on.	
Given under my hand and o	official seal, this th	e <u>22</u> day	of Mant	<del>'</del> , 2007.

My Commission Expires

Notary Public

Notary Public

Notary Public

CARL E. KINGSTON
3212 South State Street
Solf Lake City, UT 84115
My Commission Expires
06/22/2008
ETATE OF UTAH

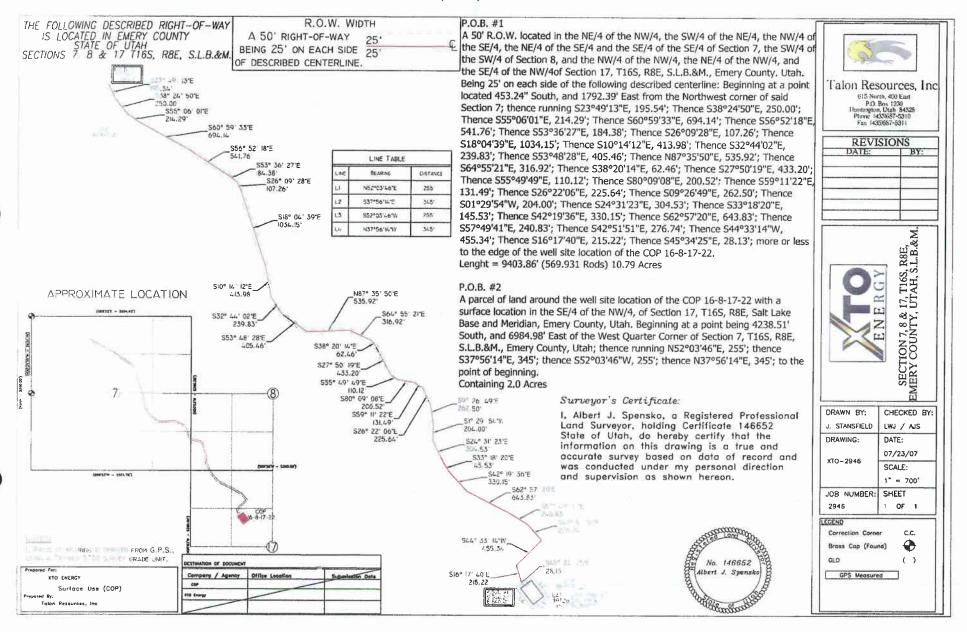
County of Tarrant

County of Tarrant

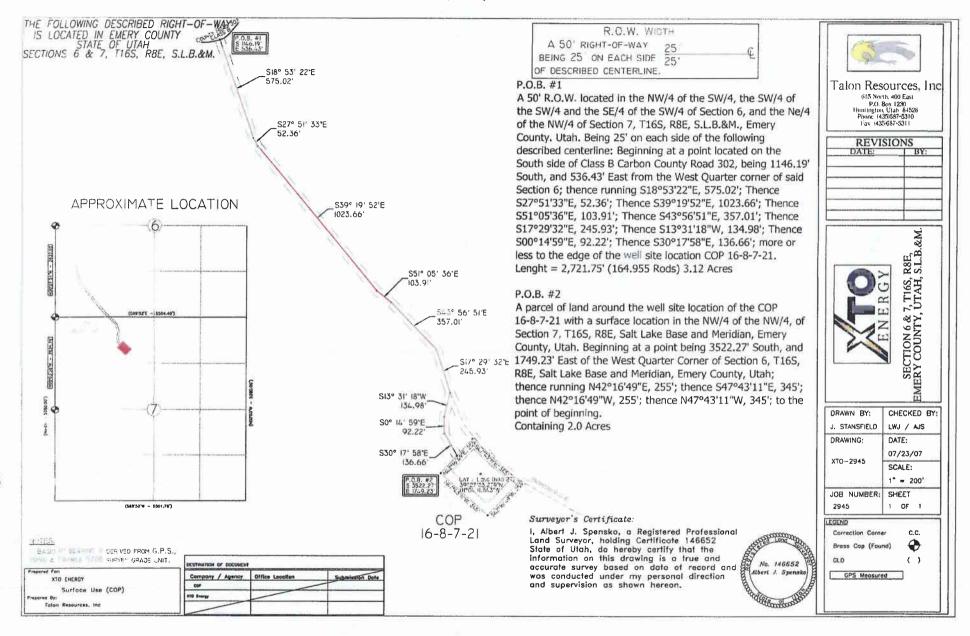
I, the undersigned authority, a Notary Public in and for said County in said State, hereby certify that Edwin S. Ryan, Jr., whose name as Senior Vice President – Land Administration of **XTO Energy Inc.**, is signed to the foregoing Memorandum of Surface Use And Damage Agreement, and who is known to me, acknowledged before me on this day that, being informed of the contents of the instrument, he, as authorized agent and with full authority, executed the same voluntarily and as the act of said corporation.

Given under my hand and official sea	l, this the 25th day of July, 2007
	Carlabanies
	Notary Public
My Commission Expires	CARLA J. DANIELS Notary Public
	STATE OF TEXAS My Comm. Emp. 06/14/2011

## EXHIBIT "A" (1 of 2)



## EXHIBIT "A" (2 of 2)



#### Application for Permit to Drill Surface Use Plan

Company:

XTO Energy, Inc

Well No:

COP 16-8-7-21

Location:

905' FNL & 1942' FWL, Section 7, T16S, R8E

#### Thirteen Point Surface Use Plan

The dirt contractor will be provided an approved copy of the surface use plan of operations before starting construction.

#### 1. Existing Roads

- a. Proposed route to location: The proposed route to location is shown on Exhibit "A" and is from the Hiawatha Quadrangle 7.5 minute series USGS quadrangle map.
- b. Location of proposed well in relation to town or other reference point: From Huntington, Utah, go North on Hwy 10 1.9 miles to the intersection of County Road #302 at Huntington Lake and turn left. Go 10.7 miles to the old Mohrland Mine site and continue up canyon. Continue for 3.1 miles to the top of Gentry Mountain. Turn left and enter through the gate on the private road. Go 0.5 miles South to the well location on the right side of the road.
- c. Contact the County Road Department for use of County Roads: No county road permits should be required.
- d. Plans for improvement and/or maintenance of existing roads: All existing roads within 1 mile of the drill site are shown on Exhibit "B". All roads that will be used to the well location will be maintained to their current conditions are better.
- e. Other Comments: None

#### 2. Planned Access Roads

- a. Location of Access Road: Starting from a point along an existing road in the NW/4 of Section 7, T16S, R8E.
- b. Length of New Road: 385' of road will need to be constructed to access this location.
- c. Length of Existing Road to Upgrade: No existing roads should need upgrades to access this location.
- d. Maximum Disturbed Width: Typically new access roads require up to 60' of disturbed width which includes ROW for gas and water pipe lines and electric service.

- e. Travel Width of Access Road: 25' or less.
- f. Maximum Grade after Construction: Maximum grades will not exceed 10% after construction.
- g. Turnouts Planned: No Turnouts are planned at this time.
- h. Surface Materials: Only native materials will be used if additional construction is required. If necessary, gravel or rock maybe purchased and used to improve road conditions and travel.
- Drainage (crowning, ditching, culverts, etc.): Roads will be re-crowned and bar ditches, if necessary, will be located on either side. 18"-24" culverts will be installed as necessary.
- j. Cattle Guards: No cattle guards are planned at this time. If necessary, cattle guards will be specified in the stipulations.
- k. Length of new and/or existing roads which lie outside the lease or unit boundary for which a BLM/State/Fee right of way is required: None.

#### l. Other:

- Surface disturbance and vehicular travel will be limited to the approved location and access road. Any additional area needed must be approved by the State of Utah in Advance.
- ii. If a right-of-way is necessary, no surface disturbing activities shall take place on the subject right-of-way until the associated APD is approved. The holder will adhere to conditions of approval in the Surface Use Program of the approved APD, relevant to any right-of-way facilities.
- iii. If a right-of-way is secured, boundary adjustments in the lease or unit shall automatically amend this right-of-way to include that portion of the facility no longer contained within the lease or unit. In the event of an automatic amendment to this right-of-way grant, the prior on-lease/unit conditions of approval of this facility will not be affected even though they would now apply to facilities outside of the lease/unit as a result of the boundary adjustment. Rental fees, if appropriate, shall be recalculated based on the conditions of this grant and the regulations in effect at the time of an automatic amendment.
- iv. If at any time the facilities located on public lands authorized by the terms of the lease are no longer included in the lease (due to a contraction in the unit or other lease or unit boundary change) the State of Utah will process a change in authorization to the appropriate statute. The authorization will be subject to appropriate rental, or other financial obligations determined by the State of Utah.

v. If the well is not productive, the access road will be rehabilitated or brought to Resource (Class III) Road Standards within 60 days of dismantling the rig. If upgraded, the access road must be maintained at these standards until the well is properly abandoned. If this time frame cannot be met, the Field Office Manager will be notified so that temporary drainage control can be installed along the access road.

#### 3. Location of Existing Wells:

a. On a map, show the location of all water, injection, disposal, producing and drilling wells within a one mile radius of the proposed well, and describe the status of each: See Exhibit "B".

#### 4. Location of Production Facilities:

- a. On-Site facilities: Typical on-site facilities will consist of a wellhead, gas flow line, water flow line, artificial lifting system (pumping unit), 2 phase separator, gas measurement, water measurement, electronics, a heated enclosure/building for weather and environmental protection and chemical injection equipment (as required). All production and measurement shall conform to the provisions of 43 CFR § 3162.7 and Onshore Oil and Gas Order No. 4, if applicable.
- b. All permanent (in place for six months or longer) structures constructed or installed on the well site location will be painted a flat, non reflective color to match the standard environmental colors, as specified by the COA's in the APD. All facilities will be painted within six months of installation. Facilities required complying with the Occupational Safety and Health Act (OSHA) may be excluded.
- c. Off-site facilities: Off-site facilities are located at the CDP station and include compression, processing, separation, tanks, pits, electronics, and produced water disposal (SWD) well.
- d. Pipelines: The well will be produced into gas and water pipelines (sizes to be determined) and transported to existing pipelines. Pipeline route has yet to be determined.
- e. Power lines: Power lines are located underground in the same ROW as the water and gas pipelines.

#### 5. Location and Type of Water Supply:

- a. All water required for drilling will be purchased from local municipal water supply. If possible, currently produced coal well water may also be used after receiving any necessary permits. Water will be trucked to location by a third party trucking company who specializes in water hauling.
- b. Water obtained on private land, or land administered by another agency, will require approval from the owner or agency for use of land.

#### 6. Source of Construction Material:

- a. Pad construction material will be obtained from (if the source is Federally owned, show location on a map): All construction material will be purchased from private land owners or from a commercial gravel/materials pit. The use of materials will conform to 43 CFR § 3610.2-3, if applicable.
- b. The use of materials under State of Utah jurisdiction will conform to 43CFR § 3610.2-3, if applicable.

#### 7. Methods of Handling Waste Disposal:

- a. Describe the methods and locations proposed for safe containment and disposal of waste material, e.g. cuttings, produced water, garbage, sewage, chemicals, etc. The reserve pit will be located along the edge and within the boundaries of the designated well pad. The walls of the pit will be sloped at no greater than 2 to 1 and will be lined with a synthetic material of approximately 12 mills in thickness. The reserve pit shall be located in cut material, with at least 50% of the pit volume being below original ground level. Three sides of the pit will be fenced before drilling starts. The forth side will be fenced as soon as drilling is completed, and shall remain until the pit is dry. The amount of time the pit way remain open will typically be specified by the COA's. Once dry, the liner will be cut and removed at the mud line and the pit will be covered and buried in place.
- b. Trash must be contained in a trash cage and hauled away to an approved disposal site as necessary but no later than the completion of drilling operations.
- c. Sewage from trailers and chemical portable toilets will be removed on a regular basis by a third party contractor and disposed of at an authorized sanitary waste facility.
- d. Any and all chemicals used during the drilling and completion of the well will be kept to a minimum and stored within the boundaries of the well pad. The third party chemical contractor will be responsible for containment and clean-up and removal of all spilled chemicals on location.

#### 8. Ancillary Facilities:

a. No ancillary facilities will be required during the drilling or completion of the well.

#### 9. Well Site Layout:

- a. Depict the pit, rig, cut and fill, topsoil, etc. on a plat with a scale of at least 1"=50'. See Exhibit "D" & "E".
- b. All equipment and vehicles that will be used to drill and complete this well will remain within the boundaries of the approved well pad. Any equipment and or vehicles parked or stored off the location will be considered trespassing on federal lands and will NOT be tolerated.

c. Materials obtained from the construction of the location, like topsoil and vegetation will be stock piled as indicated and permitted by the approved APD. The stock piles themselves may be outside the approved boundaries of the well pad.

#### 10. Plans for Restoration of the Surface:

- a. The top 6 inches of topsoil material will be removed from the location and stockpiled separately on Adjacent Land or as specified by the approved APD.
- b. Topsoil along the access road will be reserved in place adjacent to the road.
- c. Within 30-45 days after completion of well, all equipment that is not necessary for production shall be removed.
- d. The reserve pit and that portion of the location not needed for production will be reclaimed 90-120 days after completion of the well.
- e. Before any dirt work to restore the location takes place, the reserve pit must be ready for burial.
- f. All road surfacing will be removed prior to the rehabilitation of roads.
- g. Reclaimed roads will have the berms and cuts reduced and will be closed to vehicle use.
- h. All disturbed areas will be re-contoured to replicate the natural slope.
- i. The stockpiled topsoil will be evenly distributed over the disturbed area.
- j. Prior to reseeding, all disturbed areas, including the access roads, will be scarified and left with a rough surface.
- k. Seed will broadcast or drilled between September and November, or at a time specified by the BLM and or state. If broadcast, a harrow or some other implement will be dragged over the seeded area to assure seed coverage.
- 1. The following seed mixture will be used: As specified conditions of approval.
- m. If necessary, and abandonment marker will be one of the following, as specified by the State of Utah:
  - i. At least four feet above ground level,
  - ii. At restored ground level, or
  - iii. Below ground level.
  - iv. In any case the marker shall be inscribed with the following: operator name, lease number, well name and description (township, section, range, and either quarter-quarter or footages).
- n. Additional requirements: None

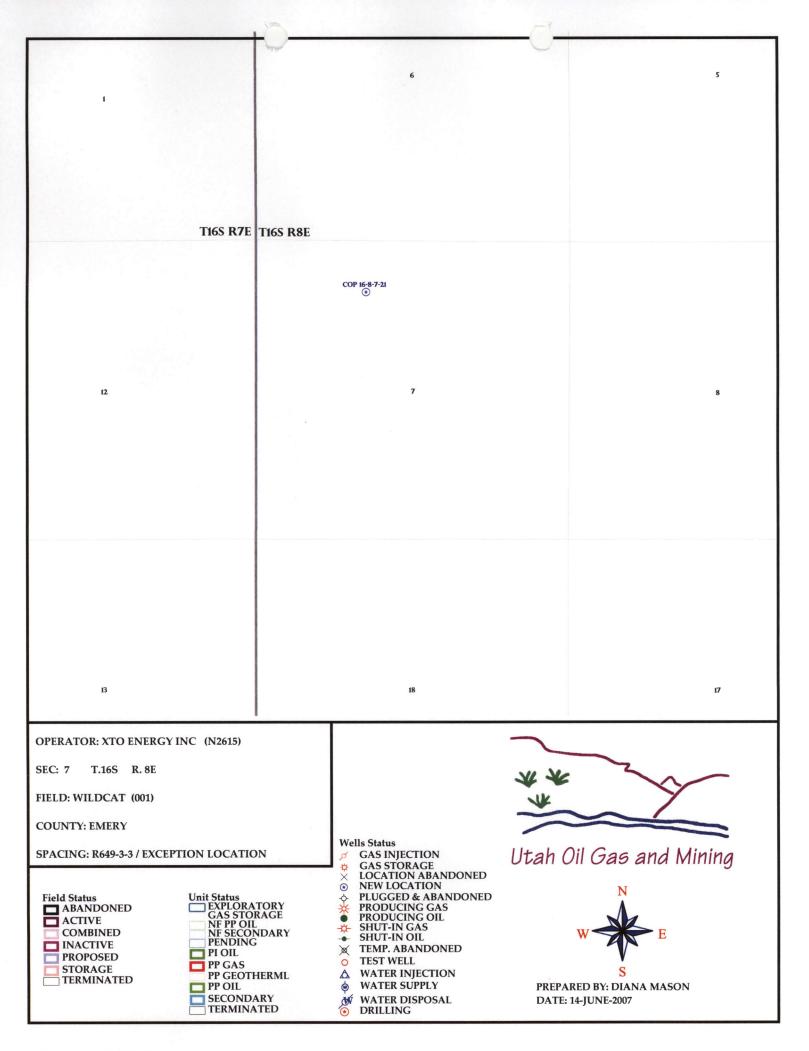
#### 11. Surface and Mineral Ownership:

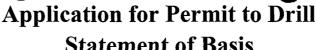
The Surface is owned by C.O.P. Coal Development Company, 3212 South State Street, Salt Lake City, UT 84155. Contact person for C.O.P. is Charles Renyolds, 435-687-2450. Surface Use agreement will be mailed in as soon as it is received. The minerals are leased by XTO Energy.

#### 12. Other Information:

- a. Archeological Concerns: An approved contractor will submit the appropriate reports to the agency as required. Special stipulations will be included in the COA's of the approved APD.
- b. The operator is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the State of Utah Field Office. Within five (5) working days, the State of Utah will inform the operator as to:
  - i. Weather the materials appear eligible for the National Register of Historic Places:
  - ii. The mitigation measures the operator will likely have to undertake before the site can be used ( assuming in situ preservation is not necessary); and
  - iii. A time frame for the State of Utah to complete an expedited review under 36 CFR § 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the State of Utah are correct and that mitigation is appropriate.
- c. If the operator wishes, at any time, to relocate activities to avoid the expenses of mitigation and/or the delays associated with this process, the State will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. The State of Utah will provide technical and procedural guidelines for the conduct of mitigation. Upon Verification from the State of Utah that the required mitigation has been completed, the operator will then be allowed to resume construction.
- d. Threatened and Endangered Species Concerns:
  - i. An approved contractor will submit the appropriate reports as required. Special Stipulations will be included in the COA's of the approved APD.
- e. Wildlife Seasonal Restrictions: Current wildlife restrictions and closure dates are specified in the BLM's Environment Impact Statement.
- 13. The Drilling Program is attached: See Exhibit "F".

APD RECEIVED: 06/08/2007		API NO. ASSIGN	NED: 43-01	5-30716
WELL NAME: COP 16-8-7-21				
OPERATOR: XTO ENERGY INC ( N2615	) F	PHONE NUMBER:	505-324-109	90
CONTACT: KYLA VAUGHAN		-		
PROPOSED LOCATION:	[	INSPECT LOCATN	BY: /	/
NENW 07 160S 080E SURFACE: 0905 FNL 1942 FWL		Tech Review	Initials	Date
BOTTOM: 0905 FNL 1942 FWL		Engineering	Duo	11/107
COUNTY: EMERY LATITUDE: 39.45095 LONGITUDE: -111.0700		Geology		
UTM SURF EASTINGS: 493980 NORTHINGS: 4366	614	Surface		
FIELD NAME: WILDCAT ( 1  LEASE TYPE: 4 - Fee  LEASE NUMBER: FEE  SURFACE OWNER: 4 - Fee	F	PROPOSED FORMAT		SD
Plat Bond: Fed[] Ind[] Sta[] Fee[] (No. 104312762 ) Potash (Y/N) Oil Shale 190-5 (B) or 190-3 or 190-13 Water Permit (No. MUNICIPAL ) RDCC Review (Y/N) (Date: 06/29/2007 ) Fee Surf Agreement (Y/N) Intent to Commingle (Y/N)	R6 Unit: R6 Si R6 Dr. B0 E S	N AND SITING:  49-2-3.  49-3-2. Generating: 460 From Qt. 49-3-3. Except  illing Unit oard Cause No: ff Date: iting:  49-3-11. Direct	r/Qtr & 920'	
COMMENTS: Needs Ples	t (05-7	22-07)		
STIPULATIONS: 1- Spacing & 2- STATEME	of of	RASIS		





Statement of Basis

9/17/2007

#### **Utah Division of Oil, Gas and Mining**

Page 1

APD No

API WellNo

Status

Well Type GW

**Surf Ownr** Ρ

**CBM** No

542

43-015-30716-00-00

Surface Owner-APD

**Operator** 

XTO ENERGY INC

Well Name COP 16-8-7-21

Unit

Field

WILDCAT

Type of Work

Location

NENW 7 16S 8E S 905 FNL 1942 FWL

GPS Coord (UTM) 493980E 4366614N

#### **Geologic Statement of Basis**

This well is situated on the highlands of the Wasatch Plateau. A review of the ground water resources for this location indicates that there are several surface water rights filed within a one mile radius of this well including three on underground sources of water. A poorly to moderately permeable soil is likely to be developed on the Cretaceous age North Horn Formation. The well will likely penetrate water saturated strata in the North Horn Formation, the Mesaverde Group and the Star Point Sandstone Member of the upper Mancos Shale, which are all within about 2000' of the surface and probably above the Base of Moderately Saline Ground Water. It is also likely that the well will penetrate several sand units of the Emery Sandstone Member of the Mancos Shale but these are sufficiently deep as to probably have poor quality ground water. There are active and historic coal mines in the area and these are also operating within the interval above 2000' below the surface. This well may penetrate workable coal beds within a mine lease and caution should be exercised in designing the casing string to protect the mining operation and the quality ground water resource. The Mohrland Mine is in nearby Left Fork (of Cedar Creek) Canyon. The proposed surface casing and cementing program ought to protect any near surface aquifers encountered during drilling although any water bearing sandstones. A benign drilling fluid system should be used as well.

Chris Kierst **APD Evaluator**  9/14/2007

Date / Time

#### **Surface Statement of Basis**

On-site evaluation conducted May 22, 2007. Present: Bart Kettle-Division of Oil, Gas and Mining (DOGM), Mark Reynolds-surface representative, Chris Nelison-Nelison Construction, Ray Trujillo-XTO, Kyla Vaughan-XTO, Ray Peterson-Emery County, Allen Childs-Talon Resources

DOGM recommends that XTO be proactive in their reclamation of project area following drilling and pipeline installation to prevent the spread of musk thistle and hounds tongue from project site into portions of their operation that are not infested.

Emery County recommends that XTO consider alternative routes of access to project site. If other routes are deemed unacceptable Emery County caution's that XTO use the county road from Moorland to Gentry Mountain wisely. Road contains many other users, steep grades and multiple rock out crops. Proactive road work would be require to maintain road in a functioning condition. Additionally adverse weather conditions can have substantial impacts to the travel conditions of the road surface.

Bart Kettle

5/22/2007

**Onsite Evaluator** 

Date / Time

#### Conditions of Approval / Application for Permit to Drill

Category

**Condition** 

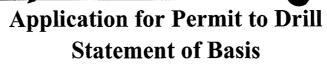
Pits

A synthetic liner with a minimum thickness of 12 mils shall be properly installed and

maintained in the reserve pit.

Surface

The reserve pit shall be fenced upon completion of drilling operations.



Utah Division of Oil, Gas and Mining

9/17/2007

Page 2

#### Utah Division of Oil, Gas and Mining

**Operator** 

XTO ENERGY INC

Well Name

COP 16-8-7-21

API Number

43-015-30716-0

**APD No** 542

Field/Unit WILDCAT

Location: 1/4,1/4 NENW

Sec 7

Tw 16S Rng 8E

905 FNL 1942 FWL

**GPS Coord (UTM)** 

**Surface Owner** 

#### **Participants**

Bart Kettle-Division of Oil, Gas and Mining (DOGM), Charles Reynolds-surface owner, Mark Reynolds-surface owner, Bedos-Nelison Construction, Ray Trujillo-XTO, Kyla Vaughan-XTO, Ray Peterson-Emery County, Allen Childs-Talon Resources

#### Regional/Local Setting & Topography

Proposed project area is located ~20 mile northwest of Huntington, located in Emery County Utah. Project site is atop of the Wasatch Plateau on the eastern rim. Drainages flow into Huntington Creek within 20 miles and eventually to the Green River 60 miles away. Project site is located in a 24-28" precept zone in open grass/forb mountain sage flat. Regionally agriculture lands are located along the valley floor 15 miles to the southeast, with the exception of the Skyline drive portions of the Wasatch Plateau, the climate is arid rangelands dominated by Salt Scrub shrub lands and Pinion/Juniper woodlands. Soils in the region are generally poorly developed, and moderate too highly erosive. At the project site vegatation is dominated by mountain sage, soils are moderaly deep clay loams underline by limestone bedrock. No perennial water sources were observed immediately adjacent to the project area.

#### Surface Use Plan

**Current Surface Use** 

Grazing

Wildlfe Habitat

New Road

Miles Well Pad

Src Const Material

**Surface Formation** 

0.25

Width 170

Length 260

Onsite

**NHORN** 

Ancillary Facilities N

#### Waste Management Plan Adequate? Y

#### **Environmental Parameters**

Affected Floodplains and/or Wetland N

#### Flora / Fauna

Flora:

Grass: Letterman's needle grass, elk sedge, mountain brome and mutton grass.

Forbs: Dandelion, cinquefoil spp, allium spp, oldman whiskers and silver lupine.

Shrubs: Mountain sage, buckwheat spp, rabbit brush spp, common snowberry and current spp.

Trees: Douglas fir and aspen.

Fauna: Mule deer, elk, bear, mountain lion, bobcat, coyote, red fox, yellow belly marmot, ground squirrel, stripped chipmunk, gray squirrel, sage grouse, blue grouse and a host of small rodents, song birds and raptors.

#### Soil Type and Characteristics

Moderately deep loam and gray clay limestone mix.

9/17/2007

**Erosion Issues** Y

High precipitation zone has the potential to create accelerated erosion of disturbed soils.

**Sedimentation Issues N** 

Site Stability Issues N

Drainage Diverson Required N

Berm Required? N

**Erosion Sedimentation Control Required?** N

Paleo Survey Run? N Paleo Potental Observed? N Cultural Survey Run? N Cultural Resources? N

#### **Reserve Pit**

Site-Specific Factors		Site I	Ranking	
Distance to Groundwater (feet)	>200		0	
Distance to Surface Water (feet)	>1000		0	
Dist. Nearest Municipal Well (ft)	>5280		0	
Distance to Other Wells (feet)	>1320		0	
Native Soil Type	Mod permeability		10	
Fluid Type	Fresh Water		5	
<b>Drill Cuttings</b>	Normal Rock		0	
Annual Precipitation (inches)	>20		10	
Affected Populations	<10		0	
<b>Presence Nearby Utility Conduits</b>	Not Present		0	
		Final Score	25	1 Sensitivity Level

#### Characteristics / Requirements

Closed Loop Mud Required? N Liner Required? Y Liner Thickness 12 Pit Underlayment Required? N

#### Other Observations / Comments

County road used to access the well site contains many steep grades and rock outcrops. Emery county cautioned XTO that road would require continual maintenance to handle rig traffic and recommended they consider other options for rig traffic. Surface owners maintain route into Hiawatha that is available for a use fee. County roads accessing project site from the north are also an option.

Well is being drilled through coal mining operations. As planned well bore will penetrate mine pillar that is not planned to be mined.

Bart Kettle 5/22/2007
Evaluator Date / Time

Online Services

Agency List

Business

## Utah Division of Water Rights

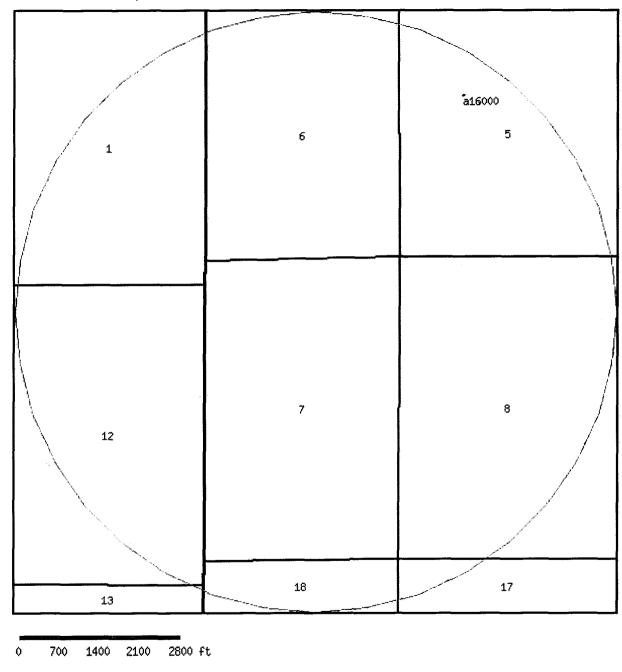


#### **WRPLAT Program Output Listing**

Version: 2007.04.13.01

Rundate: 09/14/2007 04:20 PM

Radius search of 5280 feet from a point S905 E1942 from the NW corner, section 07, Township 16S, Range 7E, SL b&m Criteria:wrtypes=W,C,E podtypes=S,U,D,Sp status=U,A,P usetypes=all



Water Rights

WR Number	Diversion Type/Location	Well Log	Status	Priority	Uses	CFS ACF	Γ Owner Name
93-3724	Underground		U	19980310	DM	1.000 0.000	HUNTINGTON CITY CORPORATION
	N120 E1393 W4 05 16S 7E SL						40 NORTH MAIN
<u>a16000</u>	Underground		A	19910204	X	0.000 26.40	0 GENWAL COAL COMPANY
	N250 E1100 W4 05 16S 7E SL						P.O. BOX 1201
<u>a16000</u>	Underground		Α	19910204	X	0.000 26.40	0 GENWAL COAL COMPANY
	N265 E1115 W4 05 16S 7E SL						P.O. BOX 1201

Natural Resources | Contact | Disclaimer | Privacy Policy | Accessibility Policy

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT (highlight changes)

	A	PPLICATI	ON FOR	PERMIT TO	DRILL		5. MINERAL LEASE NO: Fee	6. SURFACE: Fee
1A. TYPE OF WO	RK: DF	RILL 🔽 R	EENTER [	DEEPEN			7. IF INDIAN, ALLOTTEE OR N/A	TRIBE NAME:
B. TYPE OF WEL	L: OIL	GAS 🗹 O	THER	SIN	GLE ZONE 🚺 MULTIPLE ZON	E	8. UNIT or CA AGREEMENT	NAME:
2. NAME OF OPE	RATOR:			<del></del>			9. WELL NAME and NUMBE	R:
XTO Energ	y, inc.					_ /	COP 16-8-7-21	
3. ADDRESS OF	OPERATOR:	B <sub>cıty</sub> Farmin	gton <sub>ST.</sub>	ATE NM ZIP 87	PHONE NUMBER: (505) 324-1090	7	10. FIELD AND POOL, OR W Ferron Sandston	е
4. LOCATION OF	WELL (FOOTAGES	S)					11. QTR/QTR, SECTION, TO MERIDIAN:	WINSHIP, RANGE,
AT SURFACE:	905' FNL x	1942' FWL						s ¥ES
AT PROPOSED	PRODUCING ZON	⊫ same						- · · · · -
14. DISTANCE IN	MILES AND DIREC	CTION FROM NEAR	EST TOWN OR P	OST OFFICE:			12. COUNTY:	13. STATE
Approxim	ately 14 mil	es Northwes	t of Hunting	gton, Ut		İ	Emery	UTAH
15. DISTANCE TO	NEAREST PROP	ERTY OR LEASE LIP	(FEET)	16. NUMBER C	OF ACRES IN LEASE:	17. NU	MBER OF ACRES ASSIGNE	TO THIS WELL:
1942					6707.23			
18. DISTANCE TO APPLIED FOR	NEAREST WELL ON THIS LEASE	(DRILLING, COMPLI (FEET)	ETED, OR	19. PROPOSEI	DEPTH:	20. BO	ND DESCRIPTION:	
7500'				1	7,290	UT	B-000138	
		R DF, RT, GR, ETC.)		\ 1	ATÉ DATE WORK WILL START:	23. ES	TIMATED DURATION:	
9493' Ground Elevation 8/25/2007					<b>ó</b> 7	2 w	reeks	
24.			PROPO	SED CASING A	ND CEMENTING PROGRAM			
SIZE OF HOLE	CASING SIZE, C	GRADE, AND WEIGH	IT PER FOOT	SETTING DEPTH	CEMENT TYPE, QU	ANTITY, Y	(IELD, AND SLURRY WEIGH	т
14.75"	11.75"	J-55	47#	600	Type V	+/- 32	23 sx 1.61 ft3/s	x 14.2 ppç
8.75"	5.5"	J-55	15.5#	7,290	CBM light wt - lead	+/- 5	55 sx 4.15 ft3/s	х 10.5 рро
					CBM light wt - tail	+/- 9	97 sx 1.81 ft3/s	x 13.5 ppg
10.625"	8.625"	J-55	36#	4,600	CMR light wt - lead	+/- 19	95 sx 4.15 ft3/s	х 10.5 ppg
	<u> </u>							
		***						
25.				ATTA	CHMENTS			
VERIFY THE FOL	LOWING ARE ATT	ACHED IN ACCORD	ANCE WITH THE	UTAH OIL AND GAS (	CONSERVATION GENERAL RIVLES:			····
7 WELL PL	AT OR MAP PREPA	ARED BY LICENSED	SURVEYOR OR	ENGINEER	COMPLETE DRILLING PLAN			
		/						
EVIDENC	E OF DIVISION OF	WATER RIGHTS A	PPROVAL FOR U	ISE OF WATER	FORM 5, IF OPERATOR S PE	ERSON OF	R COMPANY OTHER THAN T	THE LEASE OWNER
	./				_	\		
NAME (PLEASE)	RINT) Kyla V	aughan			TITLE Regulatory Co	omplia	nce Tech	
SIGNATURE	/Ky	la Va	ughor		DATE 6/1/2007			····
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API NUMBER AS		<del></del>		<del></del>	APPROVAL;		4 4 400	7
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(11/2001)

(See Instructions on Reverse Side)

DIV. OF OIL, GAS & NIMENING



June 25, 2007

Utah Division of Oil, Gas & Mining 1594 West North Temple, Suite 1210 Box 145801 Salt Lake City, UT 84114-5801

RE: COP 16-8-7-21

Dear Diana:

In reference to the State Oil & Gas Conservation rule R649-3-3, XTO is requesting an exception location to be granted on the COP 16-8-7-21.

XTO has been working diligently with the COP Coal Development to come to an agreement as to where this location can be placed. Due to land owner issues, topographical issues, and coal mines in the surrounding area, the well bore location has been staked as a non standard location. XTO Energy Inc. respectfully request an exception location to be granted based on the above information.

There are no additional lease owners with in 460° of the proposed location. If you have any questions, please contact me at 505-564-6726.

Thank you,

Kylar Vaughan

Regulatory Compliance

FORM 3

## STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

AMENDED REPORT (highlight changes)

	A	PPLICA	TION FOR	PERMIT TO	DRILL			5. MINERA F <b>ee</b>	L LEASE NO	6. SURFACE: Fee
1A TYPE OF WO	rk DF	RILL 🔽	REENTER [	DEEPEN		<del> </del>		7. IF INDIA	N, ALLOTTEE OR	TRIBE NAME:
B TYPE OF WEI	ı OIL 🗌	gas 🗹	OTHER	SIN	GLE ZONE	MULTIPLE ZON	₽□ļ	8. UNIT or	CA AGREEMENT	NAME
2 NAME OF OPE		<del></del>							AME and NUMBER	₹
XTO Energ				·					6-8-7-21	
3 ADDRESS OF 2700 Farmi	ngton Ave. I		ington	NM 874		PHONE NUMBER (505) 324-1090			ND POOL, OR W	
4 LOCATION OF	WELL (FOOTAGE:	3)	49398	0 X =	39,450	945		11 QTR/Q MERIDI		WINSHIP RANGE,
AT SURFACE.	905' FNL x	1942' FWL	. 4 3661	0147 -1	10.0699	169		NENW		S 8E S
AT PROPOSED	PRODUCING ZON	e same								
14. DISTANCE IN	MILES AND DIREC	TION FROM NE	REST TOWN OR PO	OST OFFICE				12 COUN	Υ	13 STATE: UTAH
			est of Hunting					Emery		<u> </u>
15 DISTANCE TO	NEAREST PROPI	ERTY OR LEASE	LINE (FEET)	16 NUMBER O	FACRES IN LEA	6707.23	17. NUI	MBER OF A	CRES ASSIGNED	TO THIS WELL
	NEAREST WELL	(DRILLING, COM	PLETED, OR	19. PROPOSED	DEPTH	6707.23	20. BO	ND DESCR	PTION:	
APPLIED FOR <b>7500</b> '	I) ON THIS LEASE	(FEET)				7,290		B-0001		
	(SHOW WHETHER	R DF, RT, GR, ET	C.):	22 APPROXIM	ATE DATE WOR		L	IMATED D		
9493' Gro	und Elevation	วก		8/25/200	7		2 w	eeks		
24			PROPO	SED CASING A	ND CEMEN	TING PROGRAM				
SIZE OF HOLE	CASING SIZE, O	GRADE, AND WE	GHT PER FOOT	SETTING DEPTH		CEMENT TYPE, QUA	ANTITY, Y	'IELD, AND	SLURRY WEIGH	т
14.75"	11.75"	H-40	42#	2,200	Type V	14	W- 120	6 sx	1.61 ft3/s	x 14.2 ppg
8.75"	5.5"	J-55	15.5#	7,290	CBM ligh	t wt - lead	+/- 5	55 sx	4.15 ft3/s	x 10.5 ppg
					CBM ligh	t wt - tail	+/- 9	7 sx	1.81 ft3/s	x 13.5 ppg
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25				ATTA	CHMENTS					
VERIFY THE FOL	LOWING ARE ATT	ACHED IN ACCO	RDANCE WITH THE	UTAH OIL AND GAS C	ONSERVATION	GENERAL RULES				
WELL PL	AT OR MAP PREP	ARED BY LICENS	ED SURVEYOR OR	ENGINEER	<b>Z</b> co	OMPLETE DRILLING PLAN				
Z EVIDENO	E OF DIVISION OF	WATER RIGHTS	S APPROVAL FOR U	SE OF WATER		RM 5 IF OPERATOR IS PE	TRISON OF	COMPAN	Y OTHER THAN T	THE LEASE OWNED
NAME (PLEASE	PRINT) Kyla V	aughan	·		Tire	Regulatory Co	mplia	nce Te	ch	
SIGNATURE	Kyla	Valla	Var		DAT	e <b>9/28/2</b> 007	_	•	, .	
(This space for Sta	te use only	Ú								
	SIGNED 43-	NC-21	\ <u>\</u> \	Approve					REC	EIVED 2 8 2007
API NUMBER AS	SIGNED 43	017- 31	7-110	<del>- Ut</del> ah Div	vision of				Column .	~ ~ ~ U
				Oil, Gas a	nd Mini	ng			JEP !	2 8 2007
(11/2001)				(See Instruction	ons on Reverse S	Side)		Di		

DIV. OF OIL, GAS & MINING

#### XTO Energy, Inc.

COP 16-8-7-21 Drilling Data for APD September 24, 2007

RECEIVED

SEP 28 2007

Surface Location:

905' FNL & 1942' FWL, Sec. 7, T16S, R8E

DIV. OF OIL, GAS & MINING

Proposed TD: 7290'

Approximate Elevation: 9493'

Objective: Ferron Coal KB Elevation: 9505'

#### 1. Mud Program:

Interval	0'-2200'	2200'-7290'			
Hole Size	14.75"	8.75"			
Mud Type	Fresh Water/Spud Mud	Air/LSND/Gel Chemical			
Weight	N/A	8.4-8.6			
Viscosity	N/A	45-60			
Water Loss	N/A	8-10			

- a. Drill surface with Fresh/Water Spud Mud. If aeration becomes necessary, nipple up 20" Rotating Head.
- b. Air drill to TD using produced water for mist fluid unless excessive water flow is encountered then switch to water based mud. If mud is required, use fibrous materials as needed to control seepage and lost circulation. Pump high viscosity sweeps as needed for hole cleaning. Raise viscosity at TD for logging. Reduce viscosity after logging for cementing.
- c. The blooie line will be approximately 100' in length and will extend in a straight line from below the rotating head as indicated in the BOP schematic. An automatic spark-type igniter will be fixed to the end of the blooie line and set to provide a continuous spark to ignite and burn any produced hydrocarbons and/or gasses.
- d. If necessary, de-dusting will be accomplished with a small pump, waterline, and spray nipple positioned near the end of the blooie line to provide a continuous spray of water.
- e. Sufficient mud materials will be stored on location to maintain well control and combat lost circulation problems that might reasonably be expected.
- f. The BOP system will be consistent with API RP53 and Onshore Oil & Gas Order No. 2. Pressure tests of the surface casing and all BOP equipment subject to pressure will be conducted before drilling the casing shoe.

Blowout preventer controls will be installed prior to drilling the surface casing shoe and will remain in use until the well is completed or abandoned. Ram preventers shall be inspected and operated daily. Annular preventers shall be inspected an operated weekly to ensure good mechanical working order. The inspections and tests shall be recorded in the drilling log and daily drilling report. See the attached BOP and choke manifold schematic.

#### 2. Casing Program:

a. Surface Casing set @ 2200' in a 14.75" hole.

11.75,42 #/ft, H-40, ST&C, New, (11.084" ID, 10.928" Drift)						
Collapse	Burst	Joint	oint SF SF Burst SF			
Press	Press	Strength	Collapse		Tension	
1070	1980	307	1.12	2.07	3.32	

b. Production Casing set @ 7290' in a 8.75" hole.

5.5", 15.5 #/ft, J-55, ST&C, New, (4.950" I.D., 4.825" Drift)						
Collapse	Burst	Joint	SF	SF Burst	SF	
Press	Press	Strength	Collapse		Tension	
4040	4810	202	1.240	1.480	1.790	

Safety Factors based on vertical wellbore conditions with hydrostatic of fresh water with no backup used to calculate burst and collapse. Tension based on hanging weight in air.

If surface is set through mine workings, a DV/ECP tool will be used and the shoe will be tacked approximately two joints (85') below the mine floor and the second stage will be above the roof of the mine and cemented to surface.

#### 3. Well Heads:

- a. Casing Head: Larkin Fig 92 (or equivalent), 13-3/8" nominal, 3,000 psig WP (6,000 psig test) with 11-3/4" 8rnd thread on bottom and 13-3/8" Flange. NU BOP and choke manifold (see attached schematic). Stack to consist of drilling spool with choke and kill lines, double rams with pipe rams on top, blind rams on bottom. Use cold water and test BOP to 250 psi low and 1,000 psi high. Record all tests on the IADC report. Inspect accumulator and closing unit to ensure that pre-charge pressures and oil levels are within API Specifications and report same on IADC report.
- b. Tubing Head: Larkin Fig 612 (or equivalent), 5,000 psig WP (5,000 psig test), 5 ½" SOW (or API 8 rnd female thread) on bottom, 7  $^{1}/_{16}$ " 5,000 psig flange on top with two 3" LPOs.

#### 4. Cement Program:

- a. Surface: 1205 sx of Type V cement (or equivalent) containing 1% CaCl, ¼ pps Flocele, and 10% Cal\_Seal mixed at 14.2 ppg and 1.61 ft<sup>3</sup>/sk.
  - i. Slurry Volume is 1940 ft<sup>3</sup>, 200% excess of calculated annular volume to 2200'.

#### b. Production:

- i. The production casing will be cemented using 2 (lead and tail) cement slurries. The lead cement (filler grade) volume will be calculated based on a maximum achievable top assuming formation pressure of 1,000 psi at the shoe. The tail cement will be calculated from TD to 300' above the Upper Ferron Sandstone as indicated on the formation tops table. If fresh water is found in the Emery SS a DV/ECP will be placed in the Lower Bluegate Shale at ±4,900.
  - 1. Lead Cement: 55 sx of CBM Light Weight Cement with 10 pps Gilsonite and ¼ pps celloflake mixed at 10.5 ppg and 4.15 ft<sup>3</sup>/sk.
  - 2. Tail Cement: 97 sx of CBM Light Weight Cement with 10 pps Gilsonite and ¼ pps celloflake mixed at 13.5 ppg and 1.81 ft<sup>3</sup>/sk.
  - 3. Slurry volume is 400 ft<sup>3</sup>, 40% excess of calculated annular volume to 1,000 psi hydrostatic over formation pressure.

#### 5. Logging Program

- a. Mud logger: The mud logger will come on after surface pipe is set and will remain until TD. The mud will be logged in 10' intervals.
- b. Run Array Induction (if wet), compensated neutron, density, GR, caliper, SP (if wet), and Pe from TD to the bottom of the surface casing.

Stage 1 = 6165'

152 sx - 72,666', 404 52'

DV (6163' W) water / 322 sx

2000' w) 0 water / 714 sx

Stage 2 5035' (172 to suit)

+ surf, w/0 water

2648 w/. Water

#### 6. Formation Tops:

Formation	Well Depth	
Hiawatha Seam	1665	
Upper Bluegate Shale	1940	
Emery SS	3325	
Lower Bluegate Shale	4860	
Top of Upper Ferron SS	6730	
Top of Coal Zone	6767	
Top of Lower Ferron SS	6990	
Total Depth	7290	

- a. No known oil zones will be penetrated.
- b. Gas bearing sandstones and coals will be penetrated from 6730' to 7290'.
- c. The Emery SS may contain fresh water. The gas bearing sandstones and coals may contain in-situ water.
- d. The Hiawatha seam may be penetrated, potentially in a previously mined area. The owner of record for the mine is CO-OP Mining Company, 3212 South State Street, Salt Lake City, Utah 84115-3825.
  - The mine will be protected by setting an 11 ¾" intermediate casing through mine and cementing it as described above.
- e. Any prospectively valuable minerals and all fresh water zones encountered during drill will be recorded, cased, and cemented. If possible, water flow rates will be measured and samples will be taken and analyzed with the results being submitted to the appropriate agency.
- f. Maximum anticipated bottomhole pressure is anticipated to be less than 1,500 psi.
- g. No abnormal pressure, abnormal temperature, H2S, or other hazardous conditions are known to exist.

#### 7. Company Personnel:

Name	Title	Office Phone	Mobile Phone
John Egelston	Drilling Engineer	505.564.6734	505.330.6902
Jerry Lacy	Drilling Superintendent	505.566.7914	505.320.6543
Joshua Stark	Project Geologist	817.885.2240	817.565.7158
Leonard West	Reservoir Engineer	817.885.2800	,

#### Operator Certification:

a. Permitting and Compliance:

Kyla Vaughan Regulatory Compliance XTO Energy Inc. 2700 Farmington Avenue, Bldg K, Ste 1 Farmington, NM 87401 505-324-1090

b. Drilling and Completions:

John Egelston XTO Energy Inc. 2700 Farmington Avenue, Bldg K, Ste 1 Farmington, NM 87401 505-324-1090

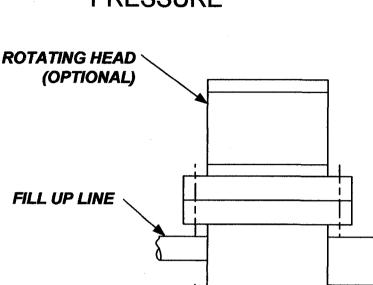
#### c. Certification:

I herby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be preformed by XTO Energy Inc. and its contractors and subcontractors in conformity with this APD package and the terms and conditions under which it is approved. I also certify responsibility for the operations conducted on that portion of the leased lands associated with this application, with bond coverage being provided by XTO Energy Inc. This statement is subject to provisions of 18 U.S.C. § 1001 for the filing of a false statement.

Signature

Kyla Xaughan

## **BOP SCHEMATIC FOR DRILLING OPERATIONS** CLASS 1 (2M) NORMAL **PRESSURF**

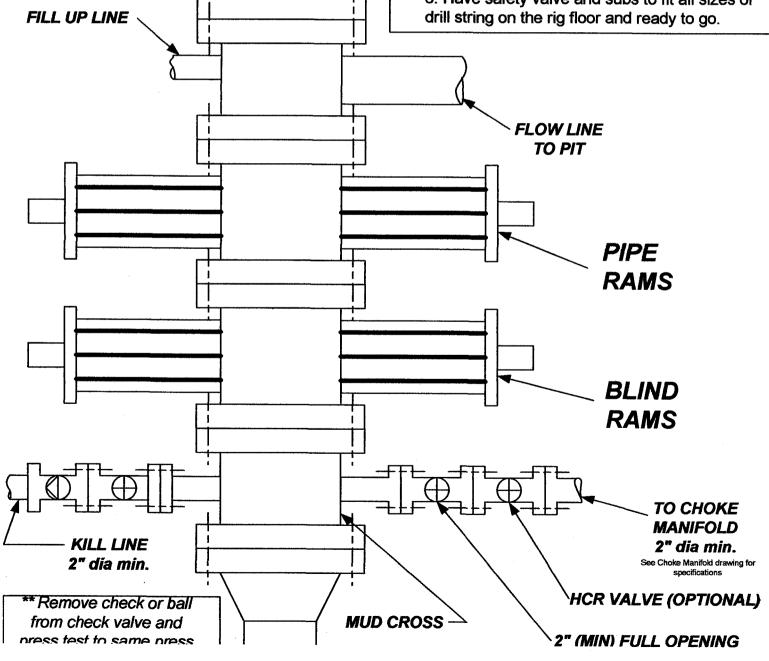


1. Test BOP er installation:

Pressure test BOP to 200-300 psig (low pressure) for 10 min.

Test BOP to Working Press or to 70% internal yield of surf csg (10 min) or which ever is less.

- 2. Test operation of (both) rams on every trip.
- 3. Check and record Accumulator pressure on every tour.
- 4. Re-pressure test BOP stack after changing out rams.
- 5. Have kelly cock valve with handle available.
- 6. Have safety valve and subs to fit all sizes of drill string on the rig floor and ready to go.

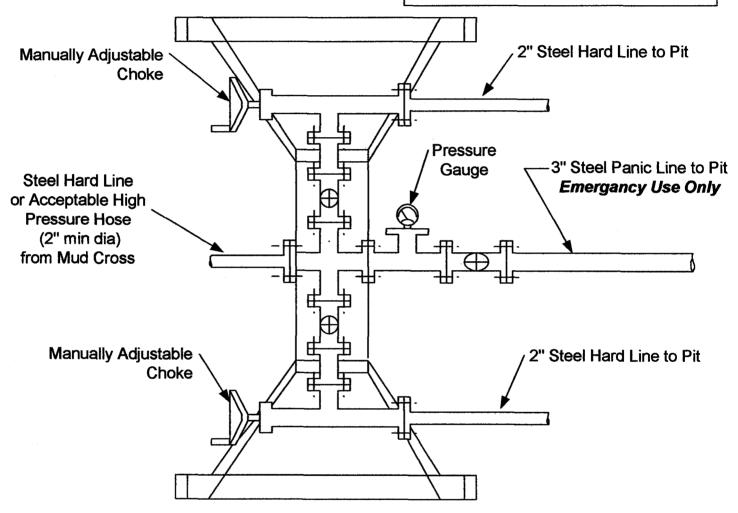


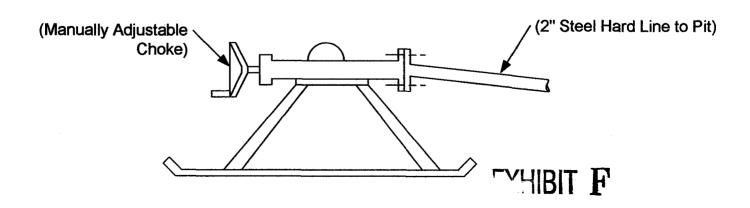
FXHIBIT F

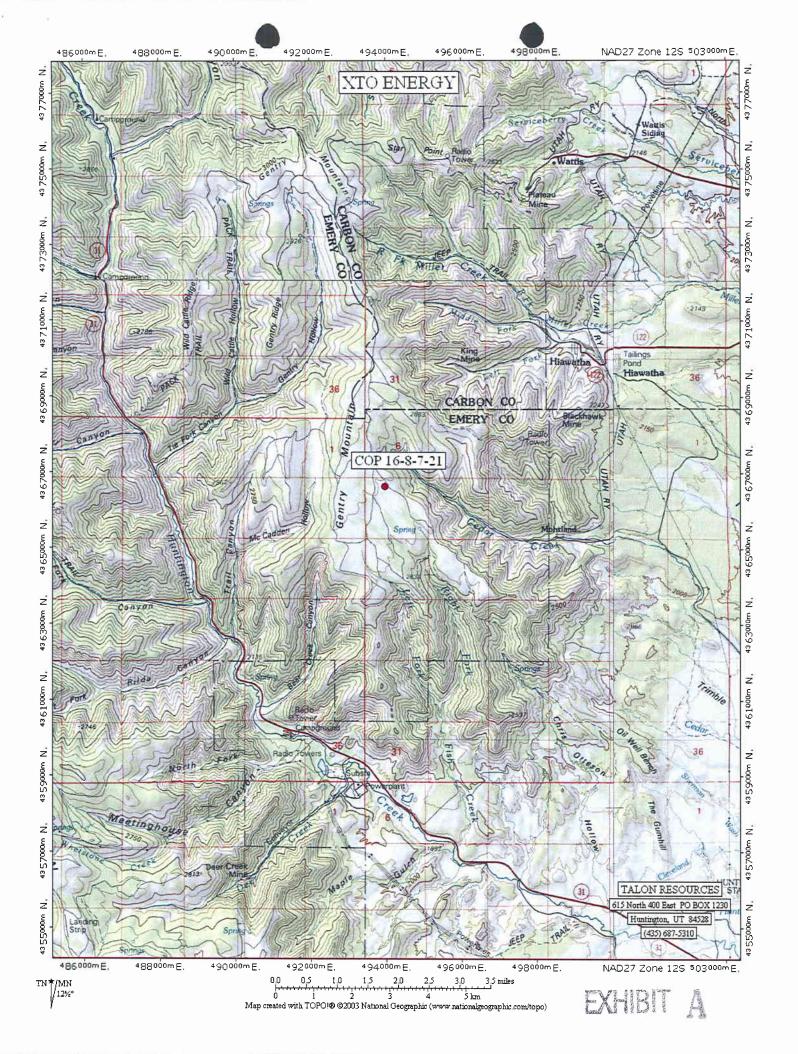
# CHOKE MANIFOLD SCHEMATIC FOR DRILLING OPERATIONS CLASS 1 (2M) NORMAL PRESSURE

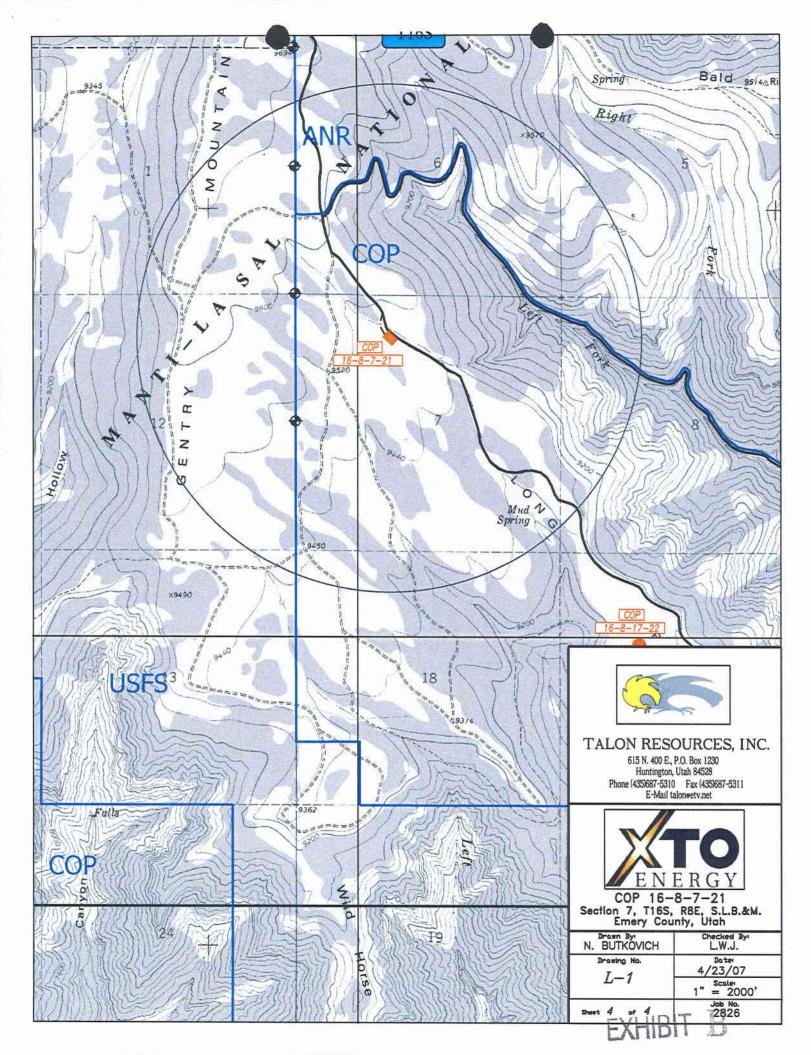
- 1. Stake all lines from choke manifold to pit.
- 2. Pressure test choke manifold after installation.
- 3. Pressure test manifold at the same time with the BOP Stack. Test manifold to the same test pressures.

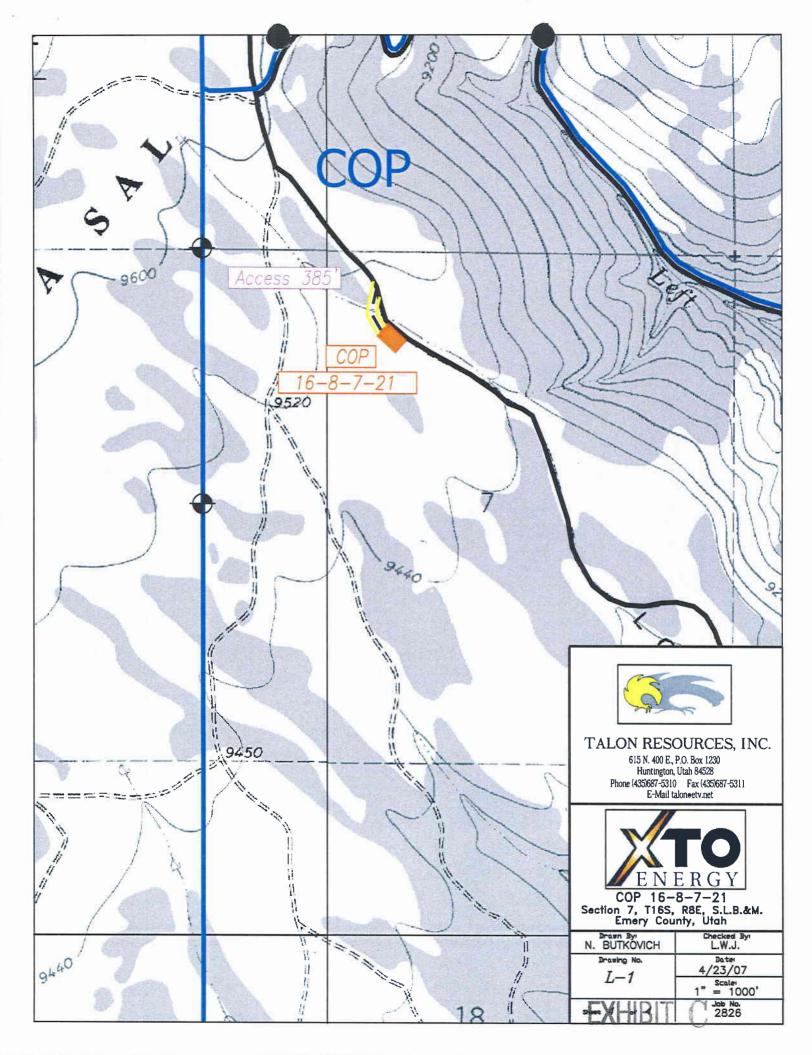
## TESTING PROCEDURE

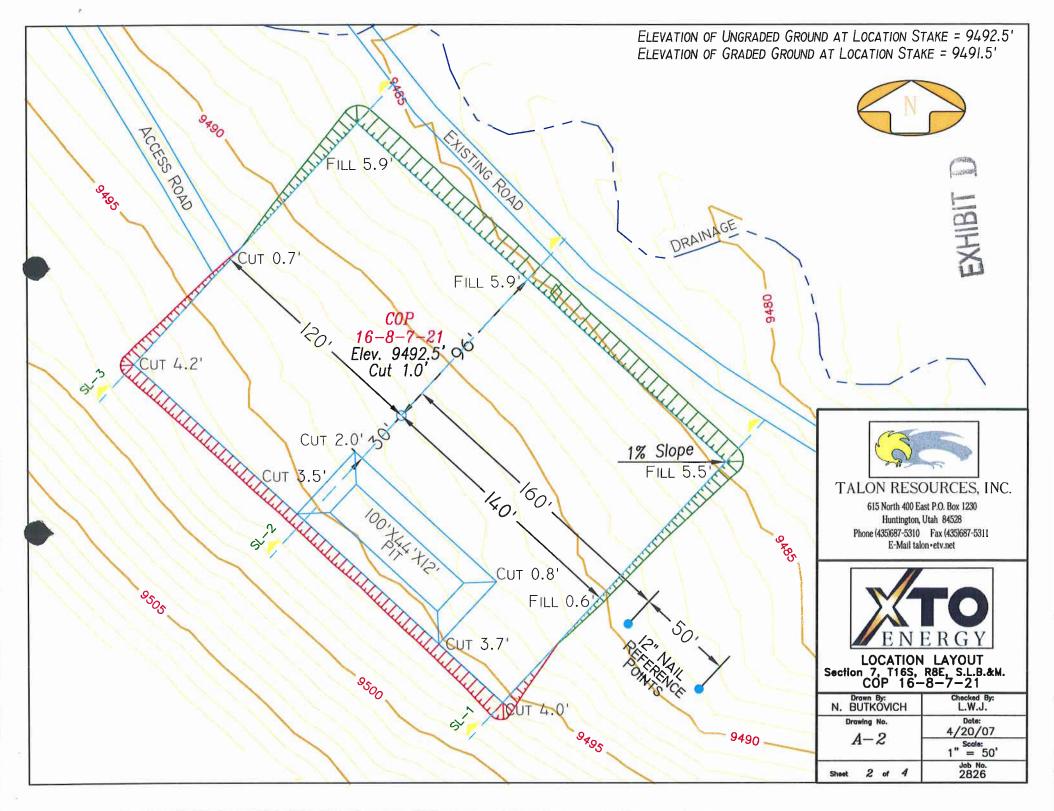












From:

<John\_Egelston@xtoenergy.com>

To:

<hmacdonald@utah.gov>

Date: Subject: 10/25/2007 9:36 AM COP Surface Casing Design

Attachments:

COP 16-8-7-21 -- Surface Casing Design Analysis.pdf

Helen,

Here is our surface casing design work-up. On page 3 it shows the load line for 8.33 gradient on the back side with 0.1 psi/foot gas gradient on the inside. The load that is plotted on that chart is the most severe loading condition for that mode of failure (collapse) as shown from the other loading scenarios detailed on page 6 (i.e. drilling with air/foam, full/partial evacuation, cementing, and fluid gradients with pore pressure). Page 7 shows minimum safety factors for the string sections. The 1.36 that is assessed at the surface casing shoe is pulled from the loading condition caused by C1, Full/Partial Evacuation. This is the first load back on page 6 with a column of 2.0 ppg mud (0.104 psi/ft equivalent) inside the casing and pore pressure gradient on the backside. The pore pressure gradient that I specified is not called out in the report (8.33 ppg was specified), but it can be backed out of the collapse load graph previously mentioned on page 3.

This evaluation will apply to both offset wells as they have the same pore pressure gradient and setting depth.

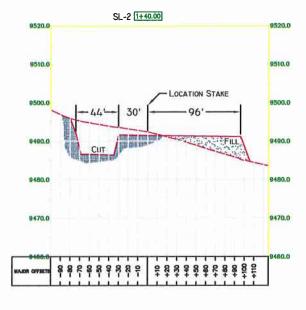
Please let me know if this helps.

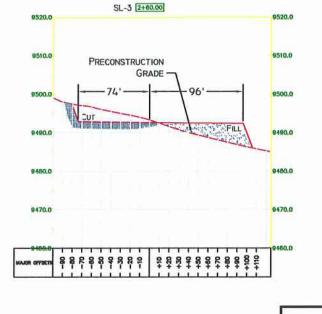
(See attached file: COP 16-8-7-21 -- Surface Casing Design Analysis.pdf)

Take care,

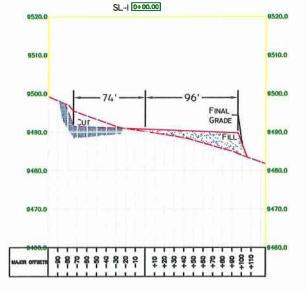
John Egelston Drilling Engineer XTO Energy

Ofc: 505.333.3163 Fax: 505.566.7927 Mob: 505.330.6902









SLOPE = | I/2 : | (EXCEPT PIT) PIT SLOPE = | ; |



1 ALON RESOURCES, INC 615 North 400 East P.O. Box 1230

Huntington, Utah 84528
Phone (435)687-5310 Fax (435)687-5311
E-Mail talon etv.net



TYPICAL CROSS SECTION Section 7, T16S, R8E, S.L.B.&M. COP 16-8-7-21

N. BUTKOVICH	Checked By: LW.J.
Drawing No.	Date: 4/20/07
C-1	1" = 100'
Sheet 3 of 4	Job No. 2826

#### APPROXIMATE YARDAGES

(6")TOPSOIL STRIPPING = 820 CU. YDS.

TOTAL CUT (INCLUDING PIT) = 2,990 CU. YDS.

TOTAL FILL = 2,655 CU. YDS.





MICHAEL R. STYLER Executive Director

Division of Oil Gas and Mining

JOHN R. BAZA
Division Director

November 1, 2007

XTO Energy, Inc. 382 Road 3100 Aztec, NM 87410-9532

Re:

COP 16-8-7-21 Well, 905' FNL, 1942' FWL, NE NW, Sec. 7, T. 16 South, R. 8 East,

Emery County, Utah

#### Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann.§ 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to drill the referenced well is granted.

Appropriate information has been submitted to DOGM and administrative approval of the requested exception location is hereby granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-015-30716.

Sincerely,

Gil Hunt

**Associate Director** 

Mit That

pab Enclosures

cc:

**Emery County Assessor** 



Operator:	XTO Energy, Inc.	
Well Name & Number	COP 16-8-7-21	
API Number:	43-015-30716	
Lease:	FEE	

Location: NE NW

Sec. 7

**T.** 16 South

R. 8 East

#### **Conditions of Approval**

#### 1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

#### 2. Notification Requirements

The operator is required to notify the Division of Oil, Gas and Mining of the following action during drilling of this well:

- 24 hours prior to cementing or testing casing contact Dan Jarvis
- 24 hours prior to testing blowout prevention equipment contact Dan Jarvis
- 24 hours prior to spudding the well contact Carol Daniels
- Within 24 hours of any emergency changes made to the approved drilling program – contact Dustin Doucet
- Prior to commencing operations to plug and abandon the well contact Dan Jarvis

The operator is required to get approval from the Division of Oil, Gas and Mining before performing any of the following actions during the drilling of this well:

- Plugging and abandonment or significant plug back of this well contact Dustin Doucet
- Any changes to the approved drilling plan contact Dustin Doucet

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voice mail message if the person is not available to take the call):

Dan Jarvis at:

(801) 538-5338 office

(801) 942-0873 home

• Carol Daniels at:

(801) 538-5284 office

• Dustin Doucet at:

(801) 538-5281 office

(801) 733-0983 home

#### 3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)

Page Two 43-015-30716 November 1, 2007

- 5. The Application for Permit to Drill has been forwarded to the Resource Development Coordinating Committee for review of this action. You will be required to comply with any applicable recommendations resulting from this review.
- 6. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.

		•	•		
		STATE OF UTAH DEPARTMENT OF NATURAL RESOUR	0056		FORM 9
		5. LEASE DESIGNATION AND SERIAL NUMBER:			
	SUNDRY	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:			
Do		new wells, significantly deepen existing wells below curn laterals. Use APPLICATION FOR PERMIT TO DRILL fo			7. UNIT or CA AGREEMENT NAME:
1. T	YPE OF WELL OIL WELL	GAS WELL 7 OTHER_			8. WELL NAME and NUMBER: COP 16-8-7-21
	AME OF OPERATOR: O ENERGY INC.				9. API NUMBER: 4301530716
	DDRESS OF OPERATOR: 2 CR 3100	TY AZTEC STATE NM 219	87410	PHONE NUMBER: (505) 333-3100-	10. FIELD AND POOL, OR WILDCAT: FERRON SANDSTONE
4. L	OCATION OF WELL				
F	OOTAGES AT SURFACE: 905' F	NL & 1942' FWL		MAS.	COUNTY: EMERY
G	TR/QTR, SECTION, TOWNSHIP, RAN	NGE, MERIDIAN: SENW 7 16S 0	8E S		STATE: UTAH
11.	CHECK APPI	ROPRIATE BOXES TO INDICAT	E NATURE	OF NOTICE, REPO	RT, OR OTHER DATA
	TYPE OF SUBMISSION		T	YPE OF ACTION	
Ø	NOTICE OF INTENT	ACIDIZE	DEEPEN		REPERFORATE CURRENT FORMATION
<u>¥</u>	(Submit in Duplicate)	ALTER CASING	FRACTURE	TREAT	SIDETRACK TO REPAIR WELL
	Approximate date work will start:	CASING REPAIR	NEW CONS	STRUCTION	TEMPORARILY ABANDON
	5/15/2008	CHANGE TO PREVIOUS PLANS	OPERATOR	R CHANGE	TUBING REPAIR
		CHANGE TUBING	PLUG AND	ABANDON	VENT OR FLARE
	SUBSEQUENT REPORT	CHANGE WELL NAME	PLUG BAC	κ .	WATER DISPOSAL
	(Submit Original Form Only)	CHANGE WELL STATUS	PRODUCTI	ON (START/RESUME)	WATER SHUT-OFF
	Date of work completion:	COMMINGLE PRODUCING FORMATIONS	RECLAMAT	TION OF WELL SITE	✓ OTHER: WELLBORE
		CONVERT WELL TYPE	RECOMPLE	ETE - DIFFERENT FORMATION	CHANGES
Ai re ar 8-	iter further review of sub questing a deeper settin nd production hole size if 5/8" OD to 7-5/8" OD.	DR	in projected <sup>:</sup> 300'), two ch XTO is char	formation tops (geolonanges in the surface organized the outside dia	ogical reinterpretation), XTO is e casing OD from 11-3/4" to 10-3/4" meter of the contingency string from
		^			
NA	ME (PLEASE ARNT) HOLLY C	C. PERKINS	TIT	LE REGULATORY	COMPLIANCE TECH

(This space for State use only)

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING

DATE

RECEIVED MAR 3 1 2008

DATE 3/26/2008

DIV. OF OIL, GAS & MINING

(5/2000)

## XTO Energy, Inc.

# COP 16-8-7-21

Drilling Data for APD March 26, 2008

Surface Location:

905' FNL & 1942' FWL, Sec. 7, T16S, R8E

Proposed TD: 7290'

Objective: Ferron Coal

Approximate Elevation: 9493'

KB Elevation: 9505'

#### 1. Mud Program:

Interval	0'-2300'	2300'-7290'
Hole Size	14.75"	9.875"
Mud Type	Fresh Water/Spud Mud	Air/LSND/Gel Chemical
Weight	N/A	8.4-8.6
Viscosity	N/A	45-60
Water Loss	N/A	8-10

- a. Drill surface with Fresh/Water Spud Mud. If aeration becomes necessary, nipple up 20" Rotating Head.
- b. Air drill to TD using produced water for mist fluid unless excessive water flow is encountered then switch to water based mud. If mud is required, use fibrous materials as needed to control seepage and lost circulation. Pump high viscosity sweeps as needed for hole cleaning. Raise viscosity at TD for logging. Reduce viscosity after logging for cementing.
- c. The blooie line will be approximately 100' in length and will extend in a straight line from below the rotating head as indicated in the BOP schematic. An automatic spark-type igniter will be fixed to the end of the blooie line and set to provide a continuous spark to ignite and burn any produced hydrocarbons and/or gasses.
- d. If necessary, de-dusting will be accomplished with a small pump, waterline, and spray nipple positioned near the end of the blooie line to provide a continuous spray of water.
- e. Sufficient mud materials will be stored on location to maintain well control and combat lost circulation problems that might reasonably be expected.
- f. The BOP system will be consistent with API RP53 and Onshore Oil & Gas Order No. 2. Pressure tests of the surface casing and all BOP equipment subject to pressure will be conducted before drilling the casing shoe. Blowout preventer controls will be installed prior to drilling the surface casing shoe and will remain

in use until the well is completed or abandoned. Ram preventers shall be inspected and operated daily. Annular preventers shall be inspected an operated weekly to ensure good mechanical working order. The inspections and tests shall be recorded in the drilling log and daily drilling report. See the attached BOP and choke manifold schematic.

#### 2. Casing Program:

a. Surface Casing set @ 2300' in a 14.75" hole.

10.75,40.5 #/ft, J-55, ST&C, New, (10.050" ID, 9.894" Drift)							
Collapse	Burst	Joint	SF	SF Burst	SF		
Press	Press	Strength	Collapse		Tension		
1580	3130	420	1.59	3.14	4.51		

b. Production Casing set @ 7290' in a 9.875" hole.

5.5", 15.5 #/ft, J-55, ST&C, New, (4.950" I.D., 4.825" Drift)								
Collapse	Burst	Joint	SF	SF Burst	SF			
Press	Press	Strength	Collapse		Tension			
4040	4810	202	1.240	1.480	1.790			

c. Contingency String Casing set @ 4600' in a 9.875" hole. (9.2 ppg mud)

7.625", 26.4#/ft, N-80, LT&C, New, (6.875" I.D., 6.750" Drift)							
Collapse	Burst	Joint	SF	SF Burst	SF		
Press	Press	Strength	Collapse		Tension		
3400	6020	490	1.71	3.02	4.03		

Safety Factors based on vertical wellbore conditions with hydrostatic of fresh water with no backup used to calculate burst and collapse. Tension based on hanging weight in air.

If surface is set through mine workings, a DV/ECP tool will be used and the shoe will be tacked approximately six joints (270') below the mine floor and the second stage will be above the roof of the mine and cemented to surface.

#### 3. Well Heads:

a. Casing Head: Larkin Fig 92 (or equivalent), 10-3/4" nominal, 3,000 psig WP (6,000 psig test) with 10-3/4" 8rnd thread on bottom and 11" X 3m Flange. NU BOP and choke manifold (see attached schematic). Stack to consist of drilling spool with choke and kill lines, double rams with pipe rams on top, blind rams on bottom. Use cold water and test BOP to 250 psi low and 1,000 psi high. Record all tests on the IADC report. Inspect accumulator and closing unit to ensure that pre-charge pressures and oil levels are within API Specifications and report same on IADC report.

b. Tubing Head: Larkin Fig 612 (or equivalent), 5,000 psig WP (5,000 psig test), 5 ½" SOW (or API 8 rnd female thread) on bottom, 7 ½" 5,000 psig flange on top with two 3" LPOs.

#### 4. Cement Program:

- a. Surface: 1345 sx of Type V cement (or equivalent) containing 1% CaCl, ¼ pps Flocele, and 10% Cal Seal mixed at 14.2 ppg and 1.61 ft<sup>3</sup>/sk.
  - i. Slurry Volume is 2165 ft<sup>3</sup>, 200% excess of calculated annular volume to 2300'.

#### b. Production:

i. The production casing will be cemented using a DV/ECP tool. On the first stage, there will be 2 (lead and tail) cement slurries. The lead cement (filler grade) volume will be calculated based on a maximum achievable top assuming formation pressure of 1,000 psi at the shoe. The tail cement will be calculated from TD to 300' above the Upper Ferron Sandstone as indicated on the formation tops table. If fresh water is found in the Emery SS the DV/ECP will be placed in the lower Bluegate Shale at ±4,750'.

#### ii. Stage 1:

- 1. Lead Cement: 30 sx of CBM Light Weight Cement with 10 pps Gilsonite and ½ pps celloflake mixed at 10.5 ppg and 4.15 ft<sup>3</sup>/sk.
- 2. Tail Cement: 365 sx of CBM Light Weight Cement with 10 pps Gilsonite and ½ pps celloflake mixed at 13.5 ppg and 1.81 ft<sup>3</sup>/sk.
- 3. Slurry volume is 785 ft<sup>3</sup>, 40% excess of calculated annular volume to 1.000 psi hydrostatic over formation pressure.

#### iii. Stage 2:

1. Lead Cement: 375 sx of CBM Light Weight Cement with 10 pps Gilsonite and ¼ pps celloflake mixed at 10.5 ppg and 4.15 ft³/sk

#### c. Contingency String:

i. In the event the contingency string is set, the cement will be a one stage job (2 slurries). The Lead cement will consist of CBM Light Weight Cement with 10 pps Gilsonite and ¼ pps celloflake mixed at 10.5 ppg and 4.15 ft³/sk, and the tail slurry consisting of CBM Light Weight Cement with 10 pps Gilsonite and ¼ pps celloflake mixed at 13.5 ppg and 1.81 ft³/sk yield..

ii. Volumes will be determined by setting depth and reported to the proper reporting agency prior to setting the string.

#### 5. Logging Program

- a. Mud logger: The mud logger will come on after surface pipe is set and will remain until TD. The mud will be logged in 10' intervals.
- b. Run Array Induction (if wet), compensated neutron, density, GR, caliper, SP (if wet), and Pe from TD to the bottom of the surface casing.

#### 6. Formation Tops:

Formation	Well Depth
Price River	260
Castlegate	800
Blackhawk Formation	1000
Hiawatha Seam	1805
Star Point SS	1815
Upper Bluegate Shale	2255
Emery SS	3190
Lower Bluegate Shale	4450
Top of Upper Ferron SS	6365
Top of Lower Ferron SS	6530
Tunuck Shale	6725
Total Depth	7290

- a. No known oil zones will be penetrated.
- b. Gas bearing sandstones and coals will be penetrated from 6365' to 7290'.
- c. The Emery SS may contain fresh water. The gas bearing sandstones and coals may contain in-situ water.

34.

- d. The Hiawatha seam may be penetrated, potentially in a previously mined area. The owner of record for the mine is CO-OP Mining Company, 3212 South State Street, Salt Lake City, Utah 84115-3825.
  - The mine will be protected by setting an 10 ¾" intermediate casing through mine and cementing it as described above.
- e. Any prospectively valuable minerals and all fresh water zones encountered during drill will be recorded, cased, and cemented. If possible, water flow rates will be measured and samples will be taken and analyzed with the results being submitted to the appropriate agency.

- f. Maximum anticipated bottomhole pressure is anticipated to be less than 1,500 psi.
- g. No abnormal pressure, abnormal temperature, H2S, or other hazardous conditions are known to exist.

### 7. Company Personnel:

Name	Title	Office Phone	<b>Mobile Phone</b>
Brent Martin	Drilling Manager	505.333.3110	505.320.4074
John Egelston	Drilling Engineer	505.333.3224	505.330.6902
Bobby Jackson	Drilling Superintendent	505.333.3224	505.486.4706
Joshua Stark	Project Geologist	817.885.2240	817.565.7158
Leonard West	Reservoir Engineer	817.885.2800	

2007-09 XTO COP 16-8-7-21rev. Well name:

XTO Energy, Inc. Operator:

Surface String type:

Project ID: 43-015-30716

**Emery County** Location:

Design parameters:

Collapse Mud weight:

Collapse: 8.330 ppq

Design factor

Minimum design factors:

**Environment:** 

H2S considered? Surface temperature:

No 65 °F 97 °F

Bottom hole temperature: Temperature gradient:

1.40 °F/100ft

Minimum section length:

150 ft

**Burst:** 

Design factor

1.00 Cement top:

1.125

Surface

**Burst** 

Max anticipated surface

2,024 psi pressure:

Internal gradient: 0.120 psi/ft Calculated BHP 2,300 psi

Design is based on evacuated pipe.

No backup mud specified.

**Tension:** 

1.80 (J) 8 Round STC: 1.80 (J) 8 Round LTC: **Buttress:** 1.60 (J)

1.50 (J) Premium: 1.50 (B) Body yield:

Tension is based on air weight. Neutral point: 2,019 ft Non-directional string.

Re subsequent strings:

Next setting depth: 7,290 ft Next mud weight: 8.600 ppg 3,257 psi Next setting BHP: Fracture mud wt: 19.250 ppg Fracture depth: 2,300 ft Injection pressure: 2,300 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	2300	10.75	40.50	J-55	ST&C	2300	2300	9.925	1267
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	995	`1580	1.588	2300	3130	1.36	93	420	4.51 J

Prepared

Helen Sadik-Macdonald

Div of Oil, Gas & Minerals by:

Phone: 801-538-5357 FAX: 801-359-3940

Date: April 1,2008 Salt Lake City, Utah

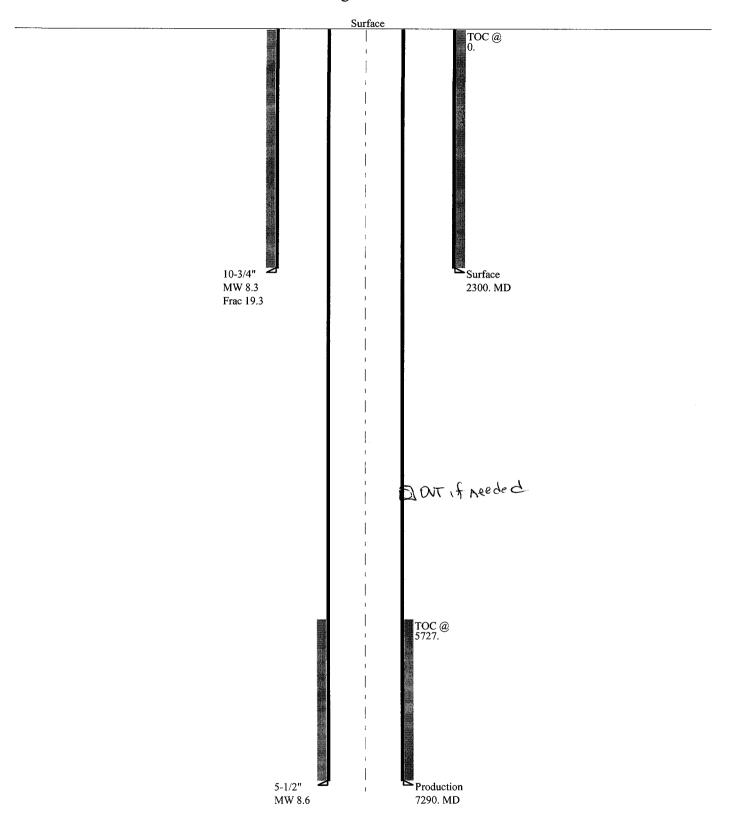
**ENGINEERING STIPULATIONS:** 

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

# 2007-09 XTO COP 16-8-7-21rev.

Casing Schematic



STATE OF UTAH FORM 9 DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING 5. LEASE DESIGNATION AND SERIAL NUMBER: FEE 6. IF INDIAN, ALLOTTEE OR TRIBE NAME: SUNDRY NOTICES AND REPORTS ON WELLS N/A 7. UNIT or CA AGREEMENT NAME: Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals. N/A 8. WELL NAME and NUMBER: 1. TYPE OF WELL OIL WELL GAS WELL 🗸 OTHER COP 16-8-7-21 9 API NI IMBER: 2. NAME OF OPERATOR: 4301530716 **XTO ENERGY INC** 3. ADDRESS OF OPERATOR: PHONE NUMBER: 10. FIELD AND POOL, OR WILDCAT: CITY AZTEC STATE NM ZIP 87410 **FERRON SANDSTONE** (505) 333-3100 382 CR 3100 4. LOCATION OF WELL COUNTY: EMERY FOOTAGES AT SURFACE: 905' FNL & 1942' FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NENW 7 8E 16S STATE: UTAH CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA 11 TYPE OF SUBMISSION TYPE OF ACTION DEEPEN REPERFORATE CURRENT FORMATION ACIDIZE  $\checkmark$ NOTICE OF INTENT SIDETRACK TO REPAIR WELL (Submit in Duplicate) ALTER CASING FRACTURE TREAT Approximate date work will start: TEMPORARILY ABANDON CASING REPAIR **NEW CONSTRUCTION** CHANGE TO PREVIOUS PLANS OPERATOR CHANGE TUBING REPAIR 5/15/2008 CHANGE TUBING PLUG AND ABANDON VENT OR FLARE SUBSEQUENT REPORT WATER DISPOSAL CHANGE WELL NAME PLUG BACK (Submit Original Form Only) WATER SHUT-OFF CHANGE WELL STATUS PRODUCTION (START/RESUME) Date of work completion: COMMINGLE PRODUCING FORMATIONS RECLAMATION OF WELL SITE OTHER: Enlarge Wellpad RECOMPLETE - DIFFERENT FORMATION CONVERT WELL TYPE 12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. XTO Energy Inc. requests permission to enlarge the location of the above well in order to provide a safe working space for a larger rig. See attached. Approved by the Utah Division of Oil, Gas and Mining COPY SENT TO OPERATOR KELLY K. ŞMALL Regulatory Compliance Tech NAME (PLEASE PRIN

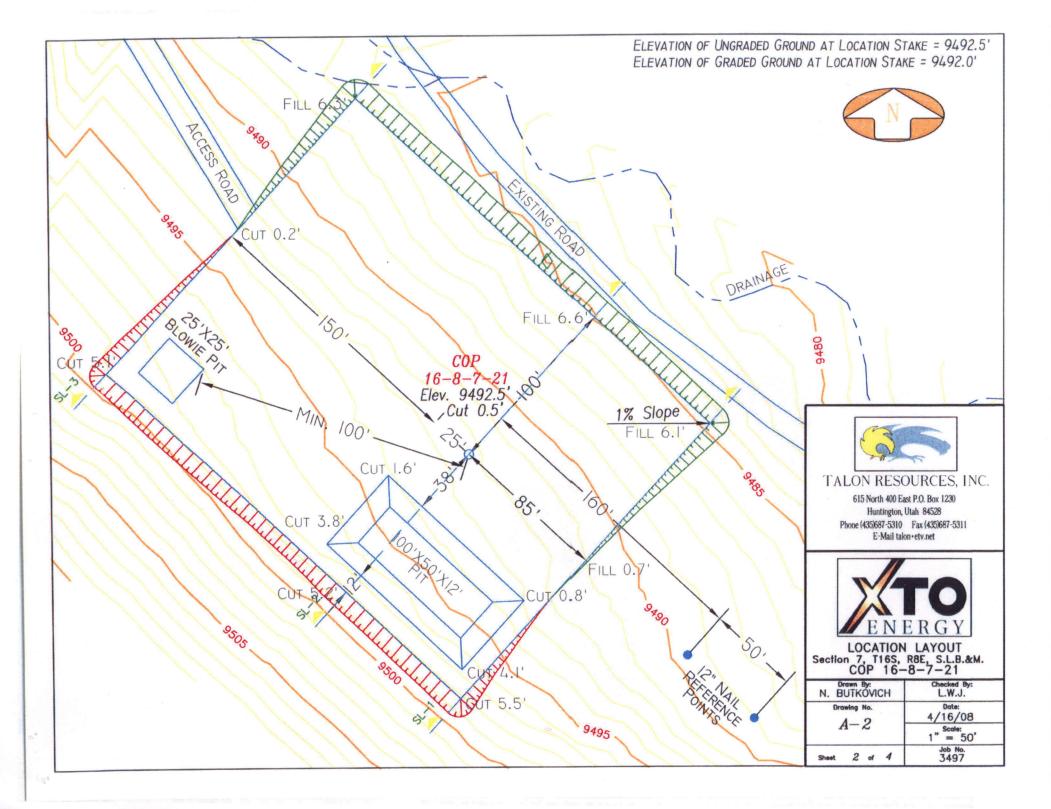
(This space for State use only)

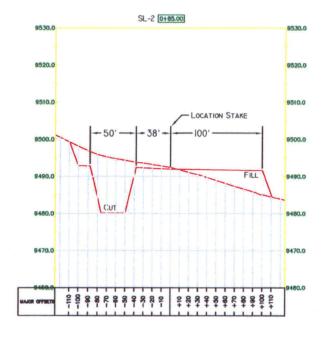
SIGNATURE

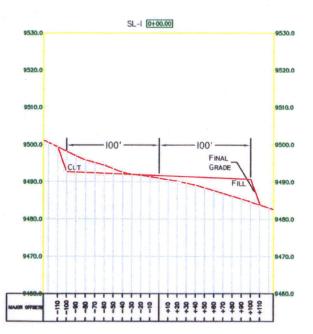
APR 2 9 2008

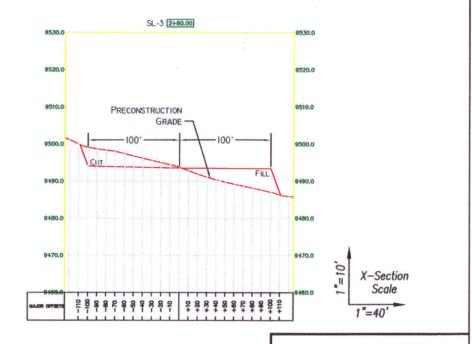
4/25/2008

DATE









SLOPE = | 1/2 : | (EXCEPT PIT) PIT SLOPE = | ; |



615 North 400 East P.O. Box 1230 Huntington, Utah 84528 Phone (435)687-5310 Fax (435)687-5311 E-Mail talon+etv.net



TYPICAL CROSS SECTION Section 7, T16S, R8E, S.L.B.&M. COP 16-8-7-21

N. BUTKOVICH	Checked By: L.W.J.	
Drawing No.	Date: 4/16/08	
C-1	1" = 100'	
Sheet 3 of 4	Job No. 3497	

#### APPROXIMATE YARDAGES

(6")TOPSOIL STRIPPING = 965 CU. YDS.

TOTAL CUT (INCLUDING PIT) = 3,940 CU. YDS.

TOTAL FILL = 3,365 CU. YDS.

COPY SENT TO OPERATOR	OCT 0 6 2008
	ECEIVED
SIGNATURE HILLY DIMON DATE 10/1/2008	
NAME (PLEASE PRINT) KELLY K. SMALL TITLE Regulatory Com	pliance Tech
Approved by the Utah Division of Oil, Gas and Mining  Date: 10-13-08  By:	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volume XTO Energy Inc. is requesting an APD extension for the above well.	nes, etc.
CHANGE TUBING PLUG AND ABANDON  SUBSEQUENT REPORT (Submit Original Form Only)  Date of work completion: CHANGE WELL STATUS PRODUCTION (START/RESUME)  COMMINGLE PRODUCING FORMATIONS RECLAMATION OF WELL SITE  CONVERT WELL TYPE RECOMPLETE - DIFFERENT FORMATION	<ul> <li>VENT OR FLARE</li> <li>WATER DISPOSAL</li> <li>WATER SHUT-OFF</li> <li>✓ OTHER: APD EXTENSION</li> </ul>
ACIDIZE  DEEPEN  ACIDIZE  DEEPEN  ALTER CASING  FRACTURE TREAT  Approximate date work will start:  CASING REPAIR  NEW CONSTRUCTION  CHANGE TO PREVIOUS PLANS  OPERATOR CHANGE	REPERFORATE CURRENT FORMATION SIDETRACK TO REPAIR WELL TEMPORARILY ABANDON TUBING REPAIR
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPO TYPE OF SUBMISSION TYPE OF ACTION	RI, OR OTHER DATA
FOOTAGES AT SURFACE: 905' FNL & 1942' FWL  QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NENW 7 16S 8E	STATE: UTAH
382 CR 3100 CITY AZTEC STATE NM ZIP 87410 (505) 333-3100 4. LOCATION OF WELL	Ferron Sandstone
XTO ENERGY INC.  3. ADDRESS OF OPERATOR:  PHONE NUMBER:  (FO.E.) 2020 24400	4301530716  10. FIELD AND POOL, OR WILDCAT:
OIL WELL GAS WELL OTHER	COP 16-8-7-21  9. API NUMBER:
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.  1. TYPE OF WELL	7. UNIT or CA AGREEMENT NAME:  8. WELL NAME and NUMBER:
SUNDRY NOTICES AND REPORTS ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
DIVISION OF OIL, GAS AND MINING	5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES	FORM 9

(5/2000)

(See Instructions on Reverse Side)

DIV. OF OIL, GAS & MINING

# Application for Permit to Drill Request for Permit Extension Validation (this form should accompany the Sundry Notice requesting permit extension)

API:

4301530716

Well Name: COP 16-8-7-21  Location: 905' FNL x 1942' FWL, Sec. 7, T16S, R8E, NENW  Company Permit Issued to: XTO Energy, Inc.  Date Original Permit Issued: 11/1/2007					
The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.					
Following is a checklist of some items related to the application, which should be verified.					
If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes ☐ No ☑					
Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes□No☑					
Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes□No☑					
Have there been any changes to the access route including ownership, or right-of-way, which could affect the proposed location? Yes□No☑					
Has the approved source of water for drilling changed? Yes□No☑					
Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes□No☑					
Is bonding still in place, which covers this proposed well? Yes⊠No□					
Signature Date					
Title: Regulatory Compliance					
Representing: XTO Energy, Inc.					
RECEIVED					

OCT 0 6 2008

	FORM 9  5.LEASE DESIGNATION AND SERIAL NUMBER: FEE				
SUNDI	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:				
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.			7.UNIT or CA AGREEMENT NAME:		
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: COP 16-8-7-21				
2. NAME OF OPERATOR: XTO ENERGY INC	9. API NUMBER: 43015307160000				
3. ADDRESS OF OPERATOR: 382 Road 3100 , Aztec, NM, 8	9. FIELD and POOL or WILDCAT: WILDCAT				
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0905 FNL 1942 FWL	COUNTY: EMERY				
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENW Section: 07 Township: 16.0S Range: 08.0E Meridian: S			STATE: UTAH		
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA					
TYPE OF SUBMISSION	TYPE OF ACTION				
l .	CHANGE TO PREVIOUS PLANS  CHANGE WELL STATUS  DEEPEN  OPERATOR CHANGE  PRODUCTION START OR RESUME  REPERFORATE CURRENT FORMATION  TUBING REPAIR  WATER SHUTOFF	state permit for the	CASING REPAIR  CHANGE WELL NAME  CONVERT WELL TYPE  NEW CONSTRUCTION  PLUG BACK  RECOMPLETE DIFFERENT FORMATION  TEMPORARY ABANDON  WATER DISPOSAL  ✓ APD EXTENSION  OTHER:  Folumes, etc.  Approved by the  Utah Division of  Oil, Gas and Mining  ate:  October 05, 2009		
NAME (PLEASE PRINT) Eden Fine	<b>PHONE NUMBER</b> 505 333-3664	TITLE Permitting Clerk			
SIGNATURE N/A		<b>DATE</b> 10/1/2009			



#### The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices** 

#### Request for Permit Extension Validation Well Number 43015307160000

**API:** 43015307160000 **Well Name:** COP 16-8-7-21

Location: 0905 FNL 1942 FWL QTR NENW SEC 07 TWNP 160S RNG 080E MER S

 $\begin{cases} \textbf{Company Permit Issued to:} & XTO ENERGY INC \\ \end{cases}$ 

Date Original Permit Issued: 11/1/2007

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

• If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes No

• Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes No

• Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes No

• Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? Yes No

• Has the approved source of water for drilling changed? Yes No

• Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes No

• No

• Approved by the
• Is bonding still in place, which covers this proposed well? Yes No

**Signature:** Eden Fine **Date:** 10/1/2009

Title: Permitting Clerk Representing: XTO ENERGY INC

Date: October 05, 2009

Oil, Gas and Mining

By:





MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining JOHN R. BAZA

Division Director

November 1, 2010

XTO Energy Inc. 382 Road 3100 Aztec, NM 87410

Re:

<u>APD Rescinded - COP 16-8-7-21, Sec. 7, T. 16S, R. 8E</u>

Emery County, Utah API No. 43-015-30716

#### Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on November 1, 2007. On October 13, 2008 and October 5, 2009, the Division granted a one-year APD extension. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective November 1, 2010.

A new APD must be filed with this office for approval <u>prior</u> to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diàna Mason

**Environmental Scientist** 

cc: Well File

Brad Hill, Technical Service Manager



Sundry Number: 75454 API Well Number: 43015307160000

STATE OF UTAH  DEPARTMENT OF NATURAL RESOURCES  DIVISION OF OIL, GAS, AND MINING			FORM 9	
			5.LEASE DESIGNATION AND SERIAL NUMBER: FEE	
SUNDRY NOTICES AND REPORTS ON WELLS			6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.			7.UNIT or CA AGREEMENT NAME:	
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2. NAME OF OPERATOR: XTO ENERGY INC	9. API NUMBER: 43015307160000			
<b>3. ADDRESS OF OPERATOR:</b> PO Box 6501, Englewood, CO, 80155  9HONE NUMBER: 303 397-3727 Ext			9. FIELD and POOL or WILDCAT: WILDCAT	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0905 FNL 1942 FWL			COUNTY: EMERY	
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NENW Section: (	STATE: UTAH			
11. CHECI	K APPROPRIATE BOXES TO INDICA	ATE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA	
TYPE OF SUBMISSION	TYPE OF ACTION			
	ACIDIZE	ALTER CASING	CASING REPAIR	
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME	
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE	
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION	
7/6/2016	OPERATOR CHANGE	L PLUG AND ABANDON	PLUG BACK	
SPUD REPORT	PRODUCTION START OR RESUME	✓ RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION	
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON	
Drilling REPORT	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL	
	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION	
Report Date:				
	WILDCAT WELL DETERMINATION	OTHER	OTHER:	
XTO Energy Inc. h the following: 07 location that was State of Utah rep Division of Wildlife R Sandberg Wheatgras Small Burnet Sainfo	completed operations. Clearly shown as completed final reclama 7/06/16: Spread top soil ou not regrowing. As per require agreed upon 6/1/2016. So Resoures: Mountain Bromeg as Great Basin Wildrye Idah in Arrowleaf Balsamroot Robiscuitroot Alsike Clover Str	ation of this well site per t to stressed area's of uest of landowners and eed mix was per Utah grass Slender Wheatgrass o Fescue Western Yarrow ocky Mountain Penstemon	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY October 27, 2016	
NAME (PLEASE PRINT) Rhonda Smith	<b>PHONE NUM</b> 505 333-3215	IBER TITLE Regulatory Clerk		
SIGNATURE N/A		DATE 10/19/2016		